

## IMPORTANT NOTICE

Due to potential delays in receiving mail, this solicitation contains the provision at FAR 52.215-5 which authorizes facsimile proposals. Offerors are encouraged to use alternatives to the mail when submitting proposals.

<b>SOLICITATION, OFFER AND AWARD</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING <b>DO</b>	PAGE OF <b>1</b>	26 PAGES
2. CONTRACT NO.		3. SOLICITATION NO.  <b>N00173-02-R-LS03</b>		4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED  <b>28 March 2002</b>
7. ISSUED BY <b>CONTRACTING OFFICER NAVAL RESEARCH LABORATORY ATTN: CODE 3230.LS WASHINGTON DC 20375-5326</b>		CODE		6. REQUISITION/PURCHASE NO.		
				8. ADDRESS OFFER TO (If other than Item 7)		

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

### SOLICITATION

9. Sealed offers in original and 3 copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in Building 222, Room 115 until 4 PM local time 29 April 2002  
(Hour) (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-10. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:	A. NAME  <b>Lisa A. Fleming</b>	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS)  <b>202-767-3739</b>
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### OFFER (Must be fully completed by offeror)

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within \_\_\_\_\_ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52-232-8)	10 CALENDAR DAYS	%	20 CALENDAR DAYS	%	30 CALENDAR DAYS	%	CALENDAR DAYS	%
14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated:	AMENDMENT NO.		DATE		AMENDMENT NO.		DATE	

15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)
15B. TELEPHONE NO. (Include area code)	15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. <input type="checkbox"/>		17. SIGNATURE
			18. OFFER DATE

### AWARD (To be completed by Government)

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION	
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:  <input type="checkbox"/> 10 U.S.C. 2304(c) ( ) <input type="checkbox"/> 41 U.S.C. 253(c) ( )		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	
		ITEM	
24. ADMINISTERED BY (If other than Item 7)	CODE	25. PAYMENT WILL BE MADE BY	
		CODE	
26. NAME OF CONTRACTING OFFICER (Type or print)		27. UNITED STATES OF AMERICA	
		(Signature of Contracting Officer)	
		28. AWARD DATE	

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

**PART I - THE SCHEDULE**  
**SECTION B**  
**SUPPLIES OR SERVICES AND PRICES/COSTS**

**B-1 SUPPLIES/SERVICES AND COSTS**

<b>ITEM NUMBER</b>	<b>SUPPLIES/SERVICES</b>	<b>ESTIMATED COST</b>	<b>FIXED FEE</b>	<b>ESTIMATED COST PLUS FIXED FEE</b>
0001	The Contractor shall provide support for systems engineering, analytical, and research technical tasks to support evolving aerospace technology in accordance with Section C.	\$	\$	\$
0002	Data in accordance with Exhibit A (DD 1423)	* NSP	* NSP	* NSP
<b>TOTAL ESTIMATED COST PLUS FIXED FEE</b>			\$	\$

\* *Not Separately Priced*

**NOTICE TO OFFERORS:** In addition to inserting the estimated cost and fixed fee for the base year above, the estimated cost and fixed fee for each optional extension of the term of the contract are to be inserted in Section H.

**SECTION C**  
**DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK**

**C-1 STATEMENT OF WORK**

The work and services to be performed hereunder shall be subject to the requirements and standards contained in Attachment (1), Statement of Work, with Exhibit A, Contract Data Requirements List, and all other Attachments cited in Section J, which are incorporated by reference into Section C.

**C-2 REQUIREMENTS FOR ON-SITE CONTRACTORS**

For those portions of the work under this contract performed at any NRL site, the contractor shall comply with the Requirements for On-Site Contractors dated 19 October 2001 which are hereby incorporated by reference. The full text is available at <http://heron.nrl.navy.mil/contracts/home.htm>.

**C-3 SUBCONTRACTING PLAN**

Subcontracting Plan \_\_\_\_\_ dated is hereby incorporated by reference and made a material part of this contract.

*(\*this provision will be included and completed at time of award, if applicable)*

**SECTION D  
PACKAGING AND MARKING****D-1 PACKAGING AND MARKING**

Preservation, packaging, packing and marking of all deliverable contract line items must conform to normal commercial packing standards to assure safe delivery at destination.

**SECTION E  
INSPECTION AND ACCEPTANCE****E-1 INSPECTION AND ACCEPTANCE CLAUSES INCORPORATED BY REFERENCE****FAR CLAUSE    TITLE**

52.246-5       -    Inspection Of Services - Cost Reimbursement (APR 1984)

**DFARS CLAUSE    TITLE**

252.246-7000   -    Material Inspection And Receiving Report (DEC 1991)

**E-2 INSPECTION AND ACCEPTANCE**

Inspection and acceptance of the final delivery will be accomplished by the Technical Manager (TM) or Contracting Officer Representative (COR) designated in Section G of this contract. Inspection and acceptance will be performed at the Naval Research Laboratory, Washington DC 20375-5320.

**SECTION F**  
**DELIVERIES OR PERFORMANCE**

**F-1 DELIVERIES OR PERFORMANCE CLAUSES INCORPORATED BY REFERENCE:**

<u><b>FAR CLAUSE</b></u>	<u><b>TITLE</b></u>
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52.242-15	- Stop-Work Order (AUG 1989) - Alternate I (APR 1984)
52.247-34	- F.O.B. Destination (NOV 1991)

**F-2 PERIOD AND PLACE OF PERFORMANCE**

- (a) The term of this contract is from date of contract award through twelve months thereafter with four options, each extending the contract term for an additional twelve months, if exercised.
- (b) The principal place of performance of this contract shall be at the Naval Research Laboratory, Washington DC.

**SECTION G**  
**CONTRACT ADMINISTRATION DATA**

**G-1 PROCURING OFFICE REPRESENTATIVE**

In order to expedite administration of the contract, the Administrative Contracting Officer (ACO) will direct inquiries to the appropriate office listed below. Please do not direct routine inquiries to the person listed in Item 20A on Standard Form 26.

Contract Matters- \*

Security Matters- \*

Safety Matters- \*

Patent Matters- \*

Release of Data- \*

The ACO will forward invention disclosures and reports directly to the Associate Counsel for Patents, Code 1008.2, Naval Research Laboratory, Washington DC 20375-5320. The Associate Counsel for Patents will return the reports along with a recommendation to the Administrative Contracting Officer. The Associate Counsel for Patents will represent the Contracting Officer with regard to invention reporting matters arising under this contract.

( \* To be completed at time of award)

**G-2 CONTRACTING OFFICER'S REPRESENTATIVE (COR) - FUNCTIONS AND LIMITATIONS**

\* is hereby designated the cognizant COR who will represent the Contracting Officer in the administration of technical details within the scope of this contract and inspection and acceptance. The COR is not otherwise authorized to make any representations or commitments of any kind on behalf of the Contracting Officer or the Government. The COR does not have the authority to alter the Contractor's obligations or change the specifications in the contract. If, as a result of technical discussions, it is desirable to alter contract obligations or statements of work, a modification must be issued in writing and signed by the Contracting Officer. The COR is responsible for reviewing the bills and charges submitted by the Contractor and informing the ACO of areas where exceptions are to be taken.

*( \* To be completed at time of award)*

**G-3 TECHNICAL DIRECTION MEMORANDUM (TDM)**

- (a) For the purposes of this clause, technical direction includes the following:
  - (1) Direction to the Contractor which shifts work emphasis between work areas or tasks, requires pursuit of certain lines of inquiry, fills in details or otherwise describes work which will accomplish the objectives described in the statement of work;
  - (2) Guidelines to the Contractor which assist in interpretation of drawings, specifications or technical portions of work description.
- (b) Technical instructions must be within the scope of work stated in the contract. Technical instructions may not be used to:
  - (1) Assign additional work under the contract;
  - (2) Direct a change as defined in the contract clause entitled "Changes";
  - (3) Increase or decrease the estimated contract cost, the fixed fee, or the time required for contract performance; or
  - (4) Change any of the terms, conditions or specifications of the contract
- (c) The TDM shall be written by the Contracting Officer's Representative (COR), with the original given to the Contractor and a copy retained in the CORs file. Technical direction may be issued orally only in emergency situations. If technical direction is issued orally, a TDM must follow within two (2) working days from the date of the oral direction. Amendments, corrections, or changes to TDMs shall also be in written format and shall include all the information set forth in paragraph (e) below.
- (d) A TDM shall be considered issued when the Government deposits it in the mail, or if transmitted by other means, when it is physically delivered to the contractor.
- (e) TDMs shall include, but not be limited to, the following information:
  - (1) Date of TDM,
  - (2) Contract Number,
  - (3) Reference to the relevant portion or item in the Statement of Work,
  - (4) The specific technical direction or clarification, and
  - (5) The signature of the COR.
- (f) CORs shall retain all files containing TDMs for a period of two (2) years after the final contract completion date.
- (g) The only individual authorized in any way to amend or modify any of the terms of this contract shall be the Contracting Officer. When, in the opinion of the Contractor, any technical direction calls

for effort outside the scope of the contract or inconsistent with this special provision, the Contractor shall notify the Contracting Officer in writing within ten (10) working days after its receipt.

#### **G-4 CONTRACTOR-ACQUIRED PROPERTY**

(A) THE CONTRACTOR IS AUTHORIZED TO ACQUIRE THE FOLLOWING ITEMS OF FACILITIES WHICH ARE NEEDED TO ACCOMPLISH THIS CONTRACT.

Items to be Acquired

Estimated Cost

\*

*(\*this provision will be included and completed at time of award, if applicable)*

(b) This authorization does not constitute any consent required pursuant to the contract clause entitled "Subcontracts" (FAR 52.244-2). Advance notification or requests for consent pursuant to that clause shall be directed to the administrative contracting officer (ACO).

(c) Pursuant to the contract clause entitled "Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts)" (FAR 52.245-5), title to the property shall vest in the Government.

(d) Prior to acquisition of any item of Industrial Plant Equipment, the Contractor must comply with the requirements of Department of Defense Federal Acquisition Regulation Supplement (DFARS 245.302-1(b)(1)(A)). (See DFARS 245.301 for definition of "Industrial Plant Equipment.")

#### **G-5 SUBCONTRACTORS/CONSULTANTS**

(a) Advance notification or requests for consent pursuant to the contract clause entitled "Subcontracts" (FAR 52.244-2) shall be directed to the cognizant administrative contracting officer (ACO).

(b) The following subcontractors/consultants have been identified in the Contractor's proposal as necessary for performance of this contract:

Subcontractor/Consultant Name

Estimated Cost

*(Paragraph (b) will be included and filled in at time of award if subcontractor/consultants are proposed by the successful offeror)*

#### **G-6 NAPS 5252.232-9001 - SUBMISSION OF INVOICES (COST-REIMBURSEMENT, TIME-AND-MATERIALS, LABOR-HOUR, OR FIXED PRICE INCENTIVE (JUL 1992))**

(a) "Invoice" as used in this clause includes contractor requests for interim payments using public vouchers (SF 1034) but does not include contractor requests for progress payments under fixed price incentive contracts.

(b) The Contractor shall submit invoices and any necessary supporting documentation, in an original and 4 copies, to the contract auditor at the following address:

*(To be completed at time of award)*

unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order. In addition, an information copy shall be submitted to [See Section G for designated COR]. Following verification, the contract auditor will forward the invoice to the designated payment office for payment in the amount determined to be owing, in accordance with the applicable payment (and fee) clause(s) of this contract.

(c) Invoices requesting interim payments shall be submitted no more than once every two weeks, unless another time period is specified in the Payments clause of this contract. For indefinite delivery type contracts, interim payment invoices shall be submitted no more than once every two weeks for each delivery orders. There shall be a lapse of no more than 30 calendar days between performance and submission of an interim payment invoice.

(d) In addition to the information identified in the Prompt Payment clause herein, each invoice shall contain the following information, as applicable:

- (1) Contract line item number (CLIN)
- (2) Subline item number (SLIN)
- (3) Accounting Classification Reference Number(ACRN)
- (4) Payment terms
- (5) Procuring activity
- (6) Date supplies provided or services performed
- (7) Costs incurred and allowable under the contract
- (8) Vessel (e.g., ship, submarine or other craft) or system for which supply/service is provided

(e) A DD Form 250, "Material Inspection and Receiving Report",

- ☐ is required with each invoice submittal.  
☒ is required only with the final invoice.  
☐ is not required.

(f) A Certificate of Performance

- ☐ shall be provided with each invoice submittal.  
☒ is not required.

(g) The Contractor's final invoice shall be identified as such, and shall list all other invoices (if any) previously tendered under this contract.

(h) Cost of performance shall be segregated, accumulated and invoiced to the appropriate ACRN categories to the extent possible. When such segregation of costs by ACRN is not possible for invoices submitted with CLIN/SLINS with more than one ACRN, an allocation ratio shall be established in the same ratio as the obligations cited in the accounting data so that costs are allocated on a proportional basis.

## G-8 INCREMENTAL FUNDING

Pursuant to the Limitation of Funds clause (FAR 52.232-22), the total amount allotted to this contract is \$\* and it is estimated that this amount is sufficient for contract performance through \*.

*(\*this provision will be included and completed at time of award, if applicable)*



**G-9 INFORMATIONAL SUBLINE ITEMS**

It is anticipated that the research and development services performed under this contract will be paid for from multiple sources of funds. Informational subline items will be established as necessary to identify each accounting citation classification.

**G-10 PAYMENT INSTRUCTIONS FOR MULTIPLE ACCOUNTING CLASSIFICATION CITATIONS (COST-REIMBURSEMENT)**

The purpose of these instructions is to permit the paying office to charge the accounting classification citations in the contract in a manner that reflects the performance of the contract. These instructions do not create any obligation on the part of the Government or the contractor nor do they in any way alter any obligation created by any other provision of the contract. Invoices should be paid from available ACRNs in the following order:

- (a) ACRNs cited on the contractor's invoice.
- (b) On a proportional basis from any ACRNs assigned to funds which will cancel at the end of the current fiscal year.
- (c) The ACRN assigned to the following line of accounting:  
97X4930.NH4A 000 77777 0 000173 2F 000000 N00173Z45000.
- (d) If funds appropriated in more than one fiscal year are allotted to the contract, the ACRN assigned to the oldest allotment of funds.
- (e) On a proportional basis from all ACRNs assigned to allotments of funds appropriated in a single fiscal year.

**SECTION H  
SPECIAL CONTRACT REQUIREMENTS****H-1 TYPE OF CONTRACT**

This is a \*

*(\*To be completed at time of award)*

**H-2 ONR 5252.237-9705 - KEY PERSONNEL (DEC 88)**

- (a) The Contractor agrees to assign to the contract tasks those persons whose resumes were submitted with its proposal and who are necessary to fulfill the requirements of the contract as "key personnel". No substitutions may be made except in accordance with this clause.
- (b) The Contractor understands that during the first ninety (90) days of the contract performance period, no personnel substitutions will be permitted unless these substitutions are unavoidable because of the incumbent's sudden illness, death or termination of employment. In any of these events, the Contractor shall promptly notify the Contracting Officer and provide the information described in paragraph (c) below. After the initial ninety (90) day period the Contractor must submit to the Contracting Officer all proposed substitutions, in writing, at least fifteen (15) days in advance

(thirty (30) days if security clearance must be obtained) of any proposed substitution and provide the information required by paragraph (c) below.

(c) Any request for substitution must include a detailed explanation of the circumstances necessitating the proposed substitution, a resume for the proposed substitute, and any other information requested by the Contracting Officer. Any proposed substitute must have qualifications equal to or superior to the qualifications of the incumbent. The Contracting Officer or his/her authorized representative will evaluate such requests and promptly notify the Contractor of his/her approval or disapproval thereof.

(d) In the event that any of the identified key personnel cease to perform under the contract and the substitute is disapproved, the contract may be immediately terminated in accordance with the Termination clause of the contract.

The following are identified as key personnel:

Senior Program Manager  
Project Manager  
Senior Engineer, Aerospace  
Master Scheduler  
Sr. Systems Engineer, Guidance, Navigation, and Control  
Engineer, Information Technologies  
Engineer, Reaction Control Systems  
Senior Engineer, Mechanical or Electrical  
Senior Intranet and Networking Specialist

*(To be completed at time of award)*

### **H-3 ONR 5252.216-9706 - LEVEL OF EFFORT (DEC 88)**

(a) The Contractor agrees to provide the total level of effort specified in the next sentence in performance of the work described in this contract. The total level of effort for performance of this contract shall be 133,010 total hours of direct labor for the base year and 133,010 total hours of direct labor for each of the option years, if exercised. This amount includes subcontractor direct labor for those subcontractors specifically identified in the Contractor's proposal as having hours included in the proposed level of effort. A breakdown of labor categories and hours is set forth in paragraph (k) below.

(b) The level of effort for this contract shall be expended at an average rate of 11,084 hours per month. It is understood and agreed that the rate of hours per month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the total hours of effort prior to the expiration of the term of the contract.

(c) The Contractor is required to notify the Contracting Officer when any of the following situations occur, or are anticipated to occur: If during any three consecutive months the monthly average is exceeded by 25% or, if at any time it is forecast that during the last three months of the contract less than 50% of the monthly average will be used during any given month; or, when 85% of the total level of effort has been expended.

(d) If, during the term of the contract, the Contractor finds it necessary to accelerate the expenditure of direct labor to such an extent that the total hours of effort specified would be used prior to the expiration of the term, the Contractor shall notify the Contracting Officer in writing, setting forth the

acceleration required, the probable benefits which would result, and an offer to undertake the acceleration at no increase in the estimated cost or fixed fee together with an offer setting forth a proposed level of effort, cost breakdown, and proposed fixed fee for continuation of the work until expiration of the term hereof. The offer shall provide that the work proposed will be subject to the terms and conditions of this contract and any additions or changes required by then current law, regulations, or directives, and that the offer, with a written notice of acceptance by the Contracting Officer, shall constitute a binding contract. The Contractor shall not accelerate any effort until receipt of such written approval by the Contracting Officer. Any agreement to accelerate will be formalized by contract modification.

(e) The Contracting Officer may, by written order, direct the Contractor to accelerate the expenditure of direct labor such that the total hours of effort specified in paragraph (a) above would be used prior to the expiration of the term. This order shall specify the acceleration required and the resulting revised term. The Contractor shall acknowledge this order within five days of receipt.

(f) If the total level of effort specified in paragraph (a) above is not provided by the Contractor during the term of this contract, the Contracting Officer shall either (i) reduce the fixed fee of this contract as follows:

$$\text{Fee Reduction} = \text{Fixed Fee} \times \frac{(\text{Required LOE Hours} - \text{Expended LOE Hours})}{\text{Required LOE Hours}}$$

or (ii) subject to the provisions of the clause of this contract entitled "Limitation of Cost," require the Contractor to continue to perform the work until the total number of hours of direct labor specified in paragraph (a) shall have been expended, at no increase in the fixed fee of this contract.

(g) In the event the government fails to fully fund the contract in a timely manner, the term of the contract may be extended accordingly with no change to cost or fee. If the government fails to fully fund the contract, the fee will be adjusted in direct proportion to that effort which was performed.

(h) Notwithstanding any of the provisions in the above paragraphs, the Contractor may furnish hours up to five percent in excess of the total hours specified in paragraph (a) above, provided that the additional effort is furnished within the term hereof, and provided further that no increase in the estimated cost or fixed fee is required, and no adjustment in the fixed fee shall be made provided that the Contractor has delivered at least 95% of the level of effort required in paragraph (a) above.

(i) It is understood that the mix of labor categories provided by the Contractor under the contract, as well as the distribution of effort among those categories, may vary considerably from the initial mix and distribution of effort which was estimated by the government or proposed by the Contractor.

(j) Nothing herein shall be construed to alter or waive any of the rights or obligations of either party pursuant to the Clause entitled "Limitation of Costs" or "Limitation of Funds," either of which clauses as incorporated herein applies to this contract.

(k) The anticipated breakdown by labor category of the total level of effort is as follows:

<u>Labor Category</u>	<u>Hours</u>
Senior Program Manager	9,400
Project Manager	18,800
Project Analyst	56,400
Project Coordinator	56,400
Administrative and Clerical Specialist	35,250
Master Scheduler	9,400

Senior Systems Engineer, GNC	37,600
Senior Engineer, Aerospace	75,200
Engineer, Aerospace	112,800
Engineer, Information Technologies	9,400
Engineer, Reaction Control Systems	9,400
Senior Engineer, Mechanical or Electrical	28,200
Component Engineer and Procurement Specialist	9,400
Technician, General Design and Support	28,200
Senior Technical Writer/Editor	18,800
Technical Writer/Editor	18,800
Senior Designer, Graphics and Multimedia	28,200
Designer, Graphics and Multimedia	28,200
Senior Internet and Networking Specialist	47,000
Internet and Networking Specialist	28,200

*Please note that the above total level of effort is based on all four options being exercised.*

#### **H-4 ONR 5252.235-9714 - REPORT PREPARATION (FEB 02)**

Scientific or technical reports prepared by the Contractor and deliverable under the terms of this contract will be prepared in accordance with format requirements contained in ANSI/NISO Z39.18-1995, Scientific and Technical Reports: Elements, Organization, and Design.

[NOTE: All NISO American National Standards are available as free, downloadable pdf(s) at <http://www.niso.org/standards/index.html> . NISO standards can also be purchased in hardcopy form from NISO Press Fulfillment, P. O. Box 451, Annapolis Junction, MD 20701-0451 USA. Telephone U.S. and Canada: (877) 736-6476; Outside the U.S. and Canada: 301-362-6904 ax: 301-206-9789.]

#### **H-5 ELECTRONIC AND INFORMATION TECHNOLOGY (EIT)**

In accordance with Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d), all EIT supplies and services provided under this contract must comply with the applicable accessibility standards issued by the Architectural and Transportation Barriers Compliance Board at 36 CFR part 1194 (see FAR Subpart 39.2). Electronic and information technology (EIT) is defined at FAR 2.101.

#### **H-6 OPTION TO EXTEND THE TERM OF THE CONTRACT**

This contract shall be renewable at the unilateral option of the Government by the Contracting Officer giving written notice of renewal to the Contractor within the existing term of the contract. The Government may exercise its option to renew the contract a total of four times and each such renewal shall extend the term of the contract by twelve (12) months. The Contractor agrees that performance under each such renewal shall be accomplished in accordance with all of the terms and conditions of this contract and at the estimated cost and fixed fee set forth below:

**First Option**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Second Option**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Third Option**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Fourth Option**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**H-7 ON-SITE USE OF GOVERNMENT PROPERTY**

It is anticipated that Government property will be used by the contractor's personnel in the performance of that portion of the contract performed on-site at the U.S. Naval Research Laboratory (NRL) including any of its field sites. Such use will be on a rent free basis and all such property shall be considered to remain in the possession and control of the NRL for property responsibility and accountability purposes.

**H-8 REPRESENTATIONS AND CERTIFICATIONS**

The Contractor's completed Representations, Certifications, and Other Statements of Offerors or Respondents is incorporated herein by reference in any resultant award.

**PART II - CONTRACT CLAUSES**  
**SECTION I**  
**CONTRACT CLAUSES**

**I-1 52.252-2 - CLAUSES INCORPORATED BY REFERENCE (FEB 1998)**

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far>  
<http://heron.nrl.navy.mil/contracts/home.htm>

**a. FEDERAL ACQUISITION REGULATION CLAUSES**

**FAR CLAUSE    TITLE**

52.202-1	-	Definitions (DEC 2001)
52.203-3	-	Gratuities (APR 1984)
52.203-5	-	Covenant Against Contingent Fees (APR 1984)
52.203-6	-	Restrictions On Subcontractor Sales To The Government (JUL 1995)
52.203-7	-	Anti-Kickback Procedures (JUL 1995)
52.203-8	-	Cancellation, Rescission, And Recovery Of Funds For Illegal Or Improper Activity (JAN 1997)
52.203-10	-	Price Or Fee Adjustment For Illegal Or Improper Activity (JAN 1997)
52.203-12	-	Limitation On Payments To Influence Certain Federal Transactions (JUN 1997)
52.204-2	-	Security Requirements (AUG 1996)
52.204-4	-	Printed Or Copied Double-Sided On Recycled Paper (AUG 2000)
52.209-6	-	Protecting The Government's Interest When Subcontracting With Contractors Debarred, Suspended, Or Proposed For Debarment (JUL 1995)
52.211-15	-	Defense Priority And Allocation Requirements (SEP 1990)
52.215-2	-	Audit And Records-Negotiation (JUN 1999)
52.215-8	-	Order Of Precedence - Uniform Contract Format (OCT 1997)
52.215-11	-	Price Reduction For Defective Cost Or Pricing Data - Modifications (OCT 1997)
52.215-13	-	Subcontractor Cost Or Pricing Data Modifications (OCT 1997)
52.215-14	-	Integrity Of Unit Prices (OCT 1997)
52.215-15	-	Pension Adjustments And Asset Reversions (DEC 1998)
52.215-17	-	Waiver Of Facilities Capital Cost Of Money (OCT 1997) ( <i>will be included if the successful offeror does not propose facilities capital cost of money</i> )
52.215-18	-	Reversion Or Adjustment Of Plans For Post-Retirement Benefits (PRB) Other Than Pensions (OCT 1997)
52.215-19	-	Notification Of Ownership Changes (OCT 1997)
52.215-21	-	Requirements For Cost Or Pricing Data Or Information Other Than Cost Or Pricing Data -Modifications (OCT 1997) - Alternate III (OCT 1997)
52.216-7	-	Allowable Cost And Payment (FEB 2002) ( <i>If the contract is with an educational institution, modify the clause by deleting from paragraph (a) "Subpart 31.2" and</i>

*substitute "Subpart 31.3". If the contract is with a state or local government, delete from paragraph (a) "Subpart 31.2" and substitute "Subpart 31.6". If the contract is with a nonprofit other than an educational institution, a state or local government, or a nonprofit organization exempted under OMB Circular A-122, modify the clause by deleting from paragraph (a) "Subpart 31.2" and substituting "Subpart 31.7".)*

- 52.216-8 - Fixed-Fee (MAR 1997)
- 52.219-4 - Notice Of Price Evaluation Preference For HUBZone Small Business Concerns (JAN 1999) ☐ Offeror elects to waive the evaluation preference.
- 52.219-8 - Utilization Of Small Business Concerns (OCT 2000)
- 52.219-9 - Small Business Subcontracting Plan (JAN 2002) - Alternate II (OCT 2001)
- 52.219-16 - Liquidated Damages-Subcontracting Plan (JAN 1999)
- 52.219-25 - Small Disadvantaged Business Participation Program-Disadvantaged Status And Reporting (OCT 1999)
- 52.222-2 - Payment For Overtime Premiums (JUL 1990) -The Use Of Overtime Is Authorized Under This Contract If The Overtime Premium Does Not Exceed "0"
- 52.222-3 - Convict Labor (AUG 1996)
- 52.222-21 - Prohibition Of Segregated Facilities (FEB 1999)
- 52.222-26 - Equal Opportunity (FEB 1999)
- 52.222-35 - Equal Opportunity For Special Disabled Veterans, Veterans Of The Vietnam Era, And Other Eligible Veterans (DEC 2001)
- 52.222-36 - Affirmative Action For Workers With Disabilities (JUN 1998)
- 52.222-37 - Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, And Other Eligible Veterans (DEC 2001)
- 52.223-3 - Hazardous Material Identification And Material Safety Data (JAN 1997)
- 52.223-5 - Pollution Prevention And Right-To-Know Information (APR 1998)
- 52.223-6 - Drug-Free Workplace (MAY 2001)
- 52.223-10 - Waste Reduction Program (AUG 2000)
- 52.223-14 - Toxic Chemical Release Reporting (OCT 2000)
- 52.225-13 - Restrictions On Certain Foreign Purchases (JUL 2000)
- 52.227-1 - Authorization And Consent (JUL 1995)- Alternate I (APR 1984)
- 52.227-2 - Notice And Assistance Regarding Patent And Copyright Infringement (AUG 1996)
- 52.227-10 - Filing Of Patent Application- Classified Subject Matter (APR 1984)
- 52.227-11 - Patent Rights - Retention By The Contractor (Short Form) (JUN 1997)  
(*will be included if the successful offeror is a small business or a non-profit organization*)
- 52.227-12 - Patent Rights - Retention By The Contractor (Long Form) (JAN 1997)  
(*will be included if the successful offeror is not a small business or a non-profit organization*)
- 52.228-7 - Insurance - Liability To Third Persons (MAR 1996)
- 52.230-2 - Cost Accounting Standards (APR 1998)
- 52.232-9 - Limitation On Withholding Of Payments (APR 1984)
- 52.232-17 - Interest (JUN 1996)
- 52.232-18 - Availability Of Funds (APR 1984)
- 52.232-20 - Limitation Of Cost (APR 1984) (*Applicable when the contract or task order is fully funded*)
- 52.232-22 - Limitation Of Funds (APR 1984) (*Applicable when the contract or task order is not fully funded*)
- 52.232-23 - Assignment Of Claims (JAN 1986) Alternate I (APR 1984)

- 52.232-25 - Prompt Payment (FEB 2002)
- 52.232-25 - Prompt Payment (FEB 2002) Alternate I (FEB 2002)
- 52.232-33 - Payment By Electronic Funds Transfer-Central Contractor Registration (MAY 1999)
- 52.233-1 - Disputes (DEC 1998) - Alternate I (DEC 1991)
- 52.233-3 - Protest After Award (AUG 1996) - Alternate I (JUN 1985)
- 52.237-2 - Protection Of Government Buildings, Equipment And Vegetation (APR 1984)
- 52.237-3 - Continuity Of Services (JAN 1991)
- 52.242-1 - Notice Of Intent To Disallow Costs (APR 1984)
- 52.242-3 - Penalties For Unallowable Costs (MAY 2001)
- 52.242-4 - Certification of Final Indirect Costs (JAN 1997)
- 52.242-13 - Bankruptcy (JUL 1995)
- 52.243-2 - Changes - Cost-Reimbursement (AUG 1987) - Alternate I (APR 1984)
- 52.244-2 - Subcontracts (AUG 1998) - Alternate I (AUG 1998)
- 52.244-5 - Competition In Subcontracting (DEC 1996)
- 52.244-6 - Subcontracts For Commercial Items (DEC 2001)
- 52.245-5 - Government Property (Cost-Reimbursement, Time-And-Material, Or Labor-Hour Contracts) (JAN 1986) (DEVIATION)
- 52.245-19 - Government Property Furnished "As-Is" (APR 1984)
- 52.246-23 - Limitation Of Liability (FEB 1997)
- 52.246-25 - Limitation Of Liability - Services (FEB 1997)
- 52.247-1 - Commercial Bill Of Lading Notations (APR 1984)
- 52.247-63 - Preference For U. S. Flag Carriers (JAN 1997)
- 52.249-6 - Termination (Cost-Reimbursement) (SEP 1996)
- 52.249-14 - Excusable Delays (APR 1984)
- 52.251-1 - Government Supply Sources (APR 1984)
- 52.252-6 - Authorized Deviations in Clauses (APR 1984)( fill in Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2))
- 52.253-1 - Computer Generated Forms (JAN 1991)

## **b. DEPARTMENT OF DEFENSE FEDERAL ACQUISITION REGULATION CLAUSES**

### **DFARS CLAUSE    TITLE**

- 252.201-7000 - Contracting Officer's Representative (DEC 1991)
- 252.203-7001 - Prohibition On Persons Convicted Of Fraud Or Other Defense Contract Related Felonies (MAR 1999)
- 252.203-7002 - Display Of DoD Hotline Poster (DEC 1991)
- 252.204-7000 - Disclosure Of Information (DEC 1991)
- 252.204-7003 - Control Of Government Personnel Work Product (APR 1992)
- 252.204-7004 - Required Central Contractor Registration (NOV 2001)
- 252.204-7005 - Oral Attestation Of Security Responsibilities (NOV 2001)
- 252.205-7000 - Provision Of Information To Cooperative Agreement Holders (DEC 1991)
- 252.209-7000 - Acquisition From Subcontractors Subject To On-Site Inspection Under The Intermediate-Range Nuclear Forces (INF) Treaty (NOV 1995)
- 252.209-7004 - Subcontracting With Firms That Are Owned Or Controlled By The Government Of A Terrorist Country (MAR 1998)
- 252.215-7000 - Pricing Adjustments (DEC 1991)
- 252.215-7002 - Cost Estimating System Requirements (OCT 1998)



- 252.219-7003 - Small Business And Small Disadvantaged Business Subcontracting Plan (DoD Contracts) (APR 1996)
- 252.219-7004 - Small, Small Disadvantaged And Women-Owned Small Business Subcontracting Plan (Test Program) (JUN 1997)
- 252.223-7004 - Drug-Free Work Force (SEP 1988)
- 252.223-7006 - Prohibition On Storage And Disposal Of Toxic And Hazardous Materials (APR 1993)
- 252.225-7001 - Buy American Act And Balance Of Payments Program (MAR 1998)
- 252.225-7002 - Qualifying Country Sources As Subcontractors (DEC 1991)
- 252.225-7012 - Preference For Certain Domestic Commodities (AUG 2000)
- 252.225-7026 - Reporting Of Contract Performance Outside The United States (JUN 2000)
- 252.225-7031 - Secondary Arab Boycott Of Israel (JUN 1992)
- 252.225-7043 - Antiterrorism/Force Protection Policy For Defense Contractors Outside The United States (JUN 1998) (fill in : Naval Criminal Investigative Service (NCIS), Code 24, telephone, DSN 228-9113 or commercial (202)433-9113)
- 252.226-7001 - Utilization of Indian Organizations and Indian-Owned Economic Enterprises-DoD Contracts (SEP 2001)
- 252.227-7013 - Rights In Technical Data -- Noncommercial Items (NOV 1995)
- 252.227-7014 - Rights In Noncommercial Computer Software And Noncommercial Computer Software Documentation (JUN 1995)
- 252.227-7016 - Rights In Bid Or Proposal Information (JUN 1995)
- 252.227-7019 - Validation Of Asserted Restrictions--Computer Software (JUN 1995)
- 252.227-7025 - Limitations On The Use Or Disclosure Of Government-Furnished Information Marked With Restrictive Legends (JUN 1995)
- 252.227-7030 - Technical Data--Withholding Of Payment (MAR 2000)
- 252.227-7034 - Patents--Subcontracts (APR 1984)
- 252.227-7036 - Declaration Of Technical Data Conformity (JAN 1997)
- 252.227-7037 - Validation Of Restrictive Markings On Technical Data (SEP 1999)
- 252.227-7039 - Patents--Reporting Of Subject Inventions (APR 1990)
- 252.231-7000 - Supplemental Cost Principles (DEC 1991)
- 252.232-7000 - Advanced Payment Pool (DEC 1991)
- 252.235-7010 - Acknowledgment Of Support And Disclaimer (MAY 1995)
- 252.235-7011 - Final Scientific Or Technical Report (SEP 1999)
- 252.242-7000 - Post Award Conference (DEC 1991)
- 252.242-7004 - Material Management And Accounting System (DEC 2000)
- 252.243-7002 - Requests For Equitable Adjustment (MAR 1998)
- 252.244-7000 - Subcontracts For Commercial Items And Commercial Components (DOD Contracts) (MAR 2000)
- 252.245-7001 - Reports Of Government Property (MAY 1994)
- 252.246-7001 - Warranty Of Data (DEC 1991)
- 252.247-7023 - Transportation Of Supplies By Sea (MAR 2000)
- 252.247-7024 - Notification Of Transportation Of Supplies By Sea (MAR 2000)  
(will be included if the successful offeror made a negative response to the inquiry at DFARS 252.247-7022)
- 252.251-7000 - Ordering From Government Supply Sources (MAY 1995)

**I-2 FAR 52.223-11 - OZONE-DEPLETING SUBSTANCES (MAY 2001)**

- (a) *Definitions.* "Ozone-depleting substance", as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR Part 82 as –
- (1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or
  - (2) Class II, including, but not limited to, hydrochlorofluorocarbons.
- (b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

**WARNING**

Contains (or manufactured with, if applicable) \*\_\_\_\_\_, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

\*The Contractor shall insert the name of the substance(s).

**PART III - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS****SECTION J****LIST OF ATTACHMENTS**

- J-1** Attachment (1) - Statement Of Work - 16 Pages, With Exhibit A - DD Form 1423, Contract Data Requirements List, 3 Pages, including Attachment 1 to Exhibit A.
- J-2** Attachment (2) – Personnel Qualifications, 7 Pages.
- J-3** Attachment (3) - DD Form 254, Contract Security Classification Specification, Ser 005-02 Dated 20020123 w/Attachments 2 Pages.
- J-4** Attachment (4) – List of Parties Interested in Teaming, 4 Pages ( *will be deleted at time of award and Attachment (4) will be "Reserved"*)
- J-5** Attachment (5) – Accounting and Appropriation Data- 1 page. \*

(\* To be included at time of award)

**PART IV - REPRESENTATIONS AND INSTRUCTIONS**  
**SECTION - K**  
**REPRESENTATIONS, CERTIFICATIONS**  
**AND OTHER STATEMENTS OF OFFERORS OR RESPONDENTS**

**K-1 REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR RESPONDENTS**

Each Offeror must submit a completed Representations, Certifications, and Other Statements Of Offerors or Respondents with its proposal which is available electronically in full text at <http://heron.nrl.navy.mil/contracts/rep&certs.htm>

**K-2 FAR 52.219-1 - SMALL BUSINESS PROGRAM REPRESENTATIONS (MAR 2001)**

The fill in information is as follows:

The NAICS code for this acquisition is 541710.

The small business size standard is 500.

**SECTION L**  
**INSTRUCTIONS CONDITIONS AND NOTICES**  
**TO OFFERORS OR RESPONDENTS**

**L-1 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)**

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far>  
<http://heron.nrl.navy.mil/contracts/home.htm>

**FAR CLAUSE      TITLE**

52.204-6	-	Data Universal Numbering System (DUNS) Number (JUNE 1999)
52.215-1	-	Instructions To Offerors- Competitive Acquisition (MAY 2001)
52.215-5	-	Facsimile Proposals (OCT 1997) Paragraph (c) is completed as follows: (202) 767-6197 (primary) or (202) 767-0494 (alternate). In addition facsimile proposals may be transmitted by e-mail to <a href="mailto:fleming@contracts.nrl.navy.mil">fleming@contracts.nrl.navy.mil</a> (primary) or <a href="mailto:dWASHINGTON@nrl.navy.mil">dWASHINGTON@nrl.navy.mil</a> (alternate) in either Microsoft Word (version 97 or earlier) or pdf format.
52.215-16	-	Facilities Capital Cost Of Money (OCT 1997)
52.219-24	-	Small Disadvantaged Business Participation Program - Targets (OCT 2000)

- 52.222-24 - Preaward On-Site Equal Opportunity Compliance Evaluation (FEB 1999)
- 52.237-10 - Identification of Uncompensated Overtime (OCT 1997)

**L-2 FAR 52.211-14 - NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (SEP 1990)**

Any contract awarded as a result of this solicitation will be a ☐ DX rated order; ☒ DO rated order certified for national use under the Defense Priorities and Allocations system (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

**L-3 FAR 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)ALTERNATE IV (OCT 1997)**

- (a) Submission of cost or pricing data is not required.
- (b) Provide information described in Section L-12, Volume II – Business Proposal. More detailed information may be required and will be requested if and when it is deemed necessary for the evaluation of a specific proposal.

**L-4 FAR 52.216-1 - TYPE OF CONTRACT (APR 1984)**

The Government contemplates award of a Cost Plus Fixed Fee Term contract resulting from this solicitation.

**L-5 FAR 52.233-2 - SERVICE OF PROTEST (AUG 1996)**

- (a) Protests, as defined in Section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO) shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from the Control Desk, Code 3200, Bldg. 222, Rm. 115, Naval Research Laboratory, 4555 Overlook Ave., S.W., Washington DC 20375-5326.
- (b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

**L-6 DFARS 252.227-7017 - IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS (JUN 1995)**

- (a) The terms used in this provision are defined in following clause or clauses contained in this solicitation—
  - (1) If a successful offeror will be required to deliver technical data, the Rights in Technical Data--Noncommercial Items clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.

- (2) If a successful offeror will not be required to deliver technical data, the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.
- (b) The identification and assertion requirements in this provision apply only to technical data, including computer software documents, or computer software to be delivered with other than unlimited rights. For contracts to be awarded under the Small Business Innovative Research Program, the notification requirements do not apply to technical data or computer software that will be generated under the resulting contract. Notification and identification is not required for restrictions based solely on copyright.
- (c) Offers submitted in response to this solicitation shall identify, to the extent known at the time an offer is submitted to the Government, the technical data or computer software that the Offeror, its subcontractors or suppliers, or potential subcontractors or suppliers, assert should be furnished to the Government with restrictions on use, release, or disclosure.
- (d) The Offeror's assertions, including the assertions of its subcontractors or suppliers or potential subcontractors or suppliers shall be submitted as an attachment to its offer in the following format, dated and signed by an official authorized to contractually obligate the Offeror:

Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software.

The Offeror asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data or computer software should be restricted:

Technical Data Computer Software to be Furnished With Restrictions*	Basis for Assertion **	Asserted Rights Category ***	Name of Person Asserting Restrictions****
(List)*****	(List)	(List)	(List)

\* For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such items, component, or process. For computer software or computer software documentation identify the software or documentation.

\*\* Generally, development at private expense, either exclusively or partially, is the only basis for asserting restrictions. For technical data, other than computer software documentation, development refers to development of the item, component, or process to which the data pertain. The Government's rights in computer software documentation generally may not be restricted. For computer software, development refers to the software. Indicate whether development was accomplished exclusively or partially at private expense. If development was not accomplished at private expense, or for computer software documentation, enter the specific basis for asserting restrictions.

\*\*\* Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited, restricted, or government purpose rights under this or a prior contract, or specially negotiated licenses).

- \*\*\*\* Corporation, individual, or other person, as appropriate.  
\*\*\*\*\* Enter "none" when all data or software will be submitted without restrictions.

Date \_\_\_\_\_  
Printed Name and Title \_\_\_\_\_  
Signature \_\_\_\_\_

(End of identification and assertion)

- (e) An offeror's failure to submit, complete, or sign the notification and identification required by paragraph (d) of this provision with its offer may render the offer ineligible for award.
- (f) If the Offeror is awarded a contract, the assertions identified in paragraph (d) of this provision shall be listed in an attachment to that contract. Upon request by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate any listed assertion.

**L-7 DFARS 252.227-7028 - TECHNICAL DATA OR COMPUTER SOFTWARE PREVIOUSLY DELIVERED TO THE GOVERNMENT (JUN 1995)**

The Offeror shall attach to its offer an identification of all documents or other media incorporating technical data or computer software it intends to deliver under this contract with other than unlimited rights that are identical or substantially similar to documents or other media that the Offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract. The attachment shall identify - -

- (a) The contract number under which the data or software were produced;
- (b) The contract number under which, and the name and address of the organization to whom, the data or software were most recently delivered or will be delivered; and
- (c) Any limitations on the Government's rights to use or disclose the data or software, including, when applicable, identification of the earliest date the limitations expire.

**L-8 GOVERNMENT-FURNISHED PROPERTY**

No material, labor, or facilities will be furnished by the Government unless provided for in the solicitation.

**L-9 INQUIRIES CONCERNING THE RFP**

Any questions concerning the RFP must be submitted in writing to the Contracting Officer at the location noted in blocks 7 and 9 of the Standard Form 33, "Solicitation, Offer and Award," no less than fifteen (15) days before closing. The Government will not consider questions received after this date. Offerors are cautioned against directing any questions concerning this RFP to technical personnel at the Naval Research Laboratory.

**L-10 INSTRUCTIONS FOR SUBMISSION AND INFORMATION REQUIRED TO EVALUATE PROPOSALS**

(1) Information for the technical/management proposal shall be placed in Volume I and be completely separate from the business proposal (Volume II).

(2) Proposal Identification/Mailing - The proposal should be packaged for delivery so as to permit safe and timely arrival at destination. The proposal package should be sent to the address shown in Block 7 of the RFP face page and marked:

**Solicitation No. N00173-02-R-LS03**

**Closing Date:**

**(As specified in Block 9, RFP face page)**

**Attn: Code 3230.LS**

(3) Proposal Format and Length - No attempt is made to restrict the proposal format and style. However, the proposal should be written and organized so as to be compatible with the RFP, the Statement of Work, company's organization and accounting structure, and proposed cost estimate. Offerors are encouraged to use recycled paper and maximize the use of double sided copying when preparing responses to solicitations.

**L-11 VOLUME I - TECHNICAL/MANAGEMENT PROPOSAL**

REQUIRED COPIES: 1 ORIGINAL AND 3 COPIES. Offerors are encouraged to submit an electronic copy of their proposal on a CD ROM or PC formatted disk in addition to their paper copies. This is in an effort to further the Government's ambitions of operating in a paperless environment.

(1) Include a matrix indicating proposed labor hours by skill category required to perform the statement of work. Please note that the contractor must propose in accordance with the level of effort breakdown identified in Section H of this Solicitation.

(2) The following information is required for evaluation of your technical/management :

**Personnel Qualifications** – The proposer should provide convincing evidence that the company has, or has the ability, to obtain personnel with relevant experience in the scientific and technical areas described in the Statement of Work. These areas are highly specialized fields and personnel without actual experience in these areas are not acceptable. The proposal should clearly show how each person offered meets the personnel qualifications as detailed in the Solicitation. The proposal should detail each person's qualifications and experience in each area of the Statement of Work. It is essential for the offeror to demonstrate that key personnel will be capable of obtaining a SECRET clearance. The proposal should specify the amount of effort each person will be performing on this contract, both by the prime contractor as well as any proposed subcontractors

**Company Experience** – The proposal must provide a narrative description of company experience on projects with scientific and technical tasks similar to those required in the Statement of Work. This description should clearly show: (1) the

relationship between the company's experience and the tasks required under the Statement of Work and (2) prior or current programs in the task areas.

**Management Ability** - The proposal must provide a narrative description of company management experience on projects with scientific and technical tasks similar to those required in the Statement of Work. This description should clearly show previous performance at meeting instrument performance, cost and schedule goals on these projects. It is essential for the offeror to demonstrate that it will be capable of obtaining a SECRET facility clearance and SECRET storage capabilities.

**Past Performance** - (a) Offerors shall submit the following information as part of their proposal. (*Offerors are encouraged to submit the information prior to other parts of the proposal to assist the government in reducing the length of the evaluation period.*) List the last three contracts or subcontracts completed by the offeror or predecessor companies during the past two years for services similar in nature to this requirement. Include in the three any current contracts or subcontracts for similar services that were awarded at least one year prior to the date of this solicitation. Offerors that have no similar previous or current contracts should provide the requested information for proposed subcontractors that will perform major or critical aspects of the requirement or for the proposed project manager or key personnel responsible for major or critical aspects of the requirement.

1. Name of contracting organization.
2. Contract number
3. Contract type
4. Total contract value
5. Description of the contract work
6. Contracting officer and telephone number
7. Contracting officer's representative, program manager, or similar official and telephone number

(b) Offerors shall contact the contracting organizations identified pursuant to paragraph (a) as soon as possible and request them to send past performance information on the identified contracts to the address in Block 7 of the face page of this solicitation. The past performance report which is available electronically in full text at <http://heron.nrl.navy.mil/contracts/home.htm> is to be provided to the contracting organization for this purpose. If the contracting organization has already collected past performance information on the contract pursuant to FAR Subpart 42.15, the format used to collect the information may be used instead of the past performance report.

(c) Offerors may include in their proposals specific information relating to problems encountered in performing the identified contracts and any corrective actions by the offeror. Offerors should not provide general information on their performance on the identified contracts as this will be obtained from the contracting organizations.



**L-12 VOLUME II - BUSINESS PROPOSAL**

REQUIRED COPIES: 1 ORIGINAL AND 3 COPIES

**(1) COST PROPOSAL**

- (a) The offeror shall submit a business proposal that includes a cost proposal with supporting information for each cost element consistent with offeror's cost accounting system. The supporting breakdown should include such elements as materials, direct labor, indirect cost, and other costs such as travel. The offeror shall provide exhibits as necessary to substantiate each cost element. Should rates be used in the proposal which are not DCAA approved, the offeror shall provide complete documentation and the rationale for their use at time of proposal submission. However, offerors are advised to use actual labor rates of proposed personnel as the basis for estimating labor costs when practicable.
- (b) It is requested that offerors provide one copy of their cost proposal on a PC formatted disk or CD Rom using software that is compatible with Microsoft Excel Version 5.
- (b) The following travel And material estimates are for evaluation purposes only. The government estimates the travel and material costs for this effort to be as shown in the matrix below:

	Base Term	Option 1	Option 2	Option 3	Option 4
Materials	\$1,000,000	\$1,050,000	\$1,102,500	\$1,157,625	\$1,215,506
Travel	\$100,000	\$105,000	\$110,250	\$115,763	\$121,551

Please note that all offers will be evaluated using the estimated amounts provided above plus applicable indirect costs.

**(2) SMALL BUSINESS PARTICIPATION**

- (a) In addition to complying with the clause at FAR 52.219-9, Small Business Subcontracting Plan (JAN 2002) with its Alternate II (OCT 2000), proposals must include information to permit evaluation of the extent of participation of small businesses and historical black colleges or universities and minority institutions in performance of the contract. Participation to be identified may be in the form of a joint venture, teaming arrangement, or subcontract. Small business concerns that are not required by FAR 52.219-9 to submit a subcontracting plan must indicate the extent to which proposed joint ventures, teaming arrangements, or subcontracts are with historically black colleges or universities and minority institutions. Information provided should include the extent of participation of such firms in terms of the value of the total acquisition and the complexity and variety of the work such firms are to perform.

(b) Proposals must also include information to permit evaluation of the extent of participation of small disadvantaged business concerns in performance of the contract. See the provision at FAR 52.219-24, Small Disadvantaged Business Participation Program--Targets (OCT 2000), and the clause at 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (OCT 1999). Any targets will be incorporated into and become part of any resulting contract. Information provided should include the extent of participation of such firms in terms of the value of the total acquisition and the complexity and variety of the work such firms are to perform.

## **SECTION M EVALUATION FACTORS FOR AWARD**

### **M-1 EVALUATION**

Award will be made to that offeror whose proposal is determined to be the best value to the Government, proposed cost and other factors considered. The Government reserves the right to make award to other than the low offeror. Although technical considerations are more important than the cost factor, the closer the technical scores of the various proposals are to one another, the more important the business considerations become.

### **M-2 EVALUATION FACTORS FOR AWARD**

Proposals will be evaluated in accordance with the following criteria. The technical factor is more important than the cost factor. The technical subfactors are listed in descending order of importance with Personnel Qualifications being significantly more important than the remaining three technical subfactors.

#### **M-2-1. TECHNICAL/MANAGEMENT**

- (1) **PERSONNEL QUALIFICATIONS** - The proposal will be evaluated on the offeror's demonstrated ability to provide personnel with: (1) the appropriate qualifications as set forth in Enclosure (1) of the Statement of Work; (2) actual relevant experience in the technical and scientific areas set forth in the Statement of Work; and (3) the ability to obtain a SECRET clearance of key personnel prior to commencing work.
- (2) **COMPANY EXPERIENCE** - The proposal will be evaluated on the offeror's demonstrated company experience in performing projects requiring scientific and technical effort which is closely similar or related to the scientific and technical efforts set forth in the Statement of Work.
- (3) **MANAGEMENT ABILITY** - The proposal will be evaluated on the offeror's demonstrated management ability and success in managing projects of similar complexity and duration as that set forth in the Statement of Work. The proposal will also be evaluated on the offeror's ability to obtain a SECRET facility clearance and SECRET storage capabilities.
- (4) **PAST PERFORMANCE** - Past performance will be evaluated on the basis of the quality of the work performed, timeliness of performance, cost control, and business

relations. The evaluation will be based on the information provided pursuant to Section L and other sources if available. The evaluation will take into account past performance information regarding predecessor companies, subcontractors that will perform major or critical aspects of the requirement, or the proposed project manager or key personnel responsible for major or critical aspects of the requirement. Offerors that have no relevant performance history or for which past performance information is not available will not be evaluated favorably or unfavorably on past performance. The government may begin proposal evaluation prior to receipt of past performance information. If, after completion of proposal evaluation except evaluation of past performance, the contracting officer determines that evaluation of past performance will not affect the outcome of competitive selection, the contracting officer may waive its evaluation in accordance with FAR 15.304(c)(3)(iv).

#### **M-2-2 COST TO THE GOVERNMENT**

Proposed estimated cost to the Government. The Government may adjust the proposed cost for purposes of evaluation based upon an evaluation of cost realism. Cost Realism means that the costs in an offeror's proposal are realistic for the work to be performed; reflect a clear understanding of the requirements; and are consistent with the various elements of the offeror's technical proposal. The cost realism evaluation includes an analysis of the adequacy of the hours, labor mix, and other direct costs to perform the work as proposed in the technical proposal as well as the proposed labor and indirect rates. It also includes evaluation of the likelihood that the risks inherent in the offeror's technical approach will result in higher actual costs than anticipated.

#### **M-2-3 SMALL BUSINESS PARTICIPATION**

(a) The extent of participation of small businesses and historically black colleges or universities and minority institutions in performance of the contract will be evaluated on the basis of the proposed extent of participation of such firms in terms of the value of the total acquisition and the complexity and variety of the work such firms are to perform.

(b) The extent of participation of small disadvantaged business concerns in performance of the contract will be evaluated on the basis of the proposed extent of participation of such firms in terms of the value of the total acquisition and the complexity and variety of the work such firms are to perform.

#### **M-3 FAR 52.217-5 - EVALUATION OF OPTIONS (JUL 1990)**

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

# **Statement of Work**

**For**

**Systems Development Services (SDS)**

## **1. INTRODUCTION**

The Naval Research Laboratory (NRL) performs a variety of research, development, and applications-oriented activities to: (a) preserve and enhance a strong aerospace systems technology base, and (b) provide expert capabilities in the development, acquisition, and operation of aerospace systems. This includes developing experimental and operational concepts, along with prototypes, to verify and validate future space systems technologies for the Navy, the Department of Defense (DoD), the National Aeronautics and Space Administration (NASA), Ballistic Missile Defense Office (BMDO), National agencies, and the private sector. Recent and ongoing space technology efforts include *WindSat*, *FAME*, *NEMO*, the *Interim Control Module (ICM)*, and DITP. Future efforts may include advanced technology demonstrations, leveraging of commercial space systems to provide new military capabilities, orbit transfer and maintenance, satellite dispenser vehicle development, interceptor development, hyperspectral, ionospheric, and meteorological remote sensing payloads, science instrumentation, robotics and information technologies, and virtual engineering design. These efforts involve a wide range of scientific and technical investigations, including concept development; systems definition; subsystem and payload development, assembly and test; systems integration; launch vehicle integration; and flight operations support; and technology transition.

## **2. PURPOSE**

This SOW provides for the execution of specific systems engineering, analytical, and technical tasks to support evolving aerospace technology. These tasks may extend from mission concept design and feasibility analysis through on-orbit operation of space systems. Flight test activities may include spacecraft subsystems and components, flight experiments, instrumentation and sensors, freeflyer satellites and their subsystems, orbit transfer vehicles and dispensers, launch vehicle and sounding rocket experiments, ground support systems, technology demonstrations, and special flight experiments.

## **3. SCOPE**

The contractor shall provide specialized space system expertise, along with engineering and technical support, travel, and materials to perform the tasks of this SOW. Task-associated support shall be provided for mechanical, structural, aerodynamic, thermal, propulsive, electronic, and related advanced hardware and software development, along with integration and test of advanced subsystems on designated space and launch systems. Activities shall provide technical support for concept studies; subsystem and payload design and development; integration and test; concept and feasibility studies; requirement definition; subsystem design and development; and on-orbit operation of space systems. Activities may include the design and development of subsystems, space flight and rocket experiments, instrumentation and sensors, along with the acquisition of specific hardware items. Potential areas of activity will include satellites and their subsystems, orbit transfer vehicles and dispensers, launch vehicle, sounding rocket, and interceptor experiments, ground systems, technology demonstrations, special flight experiments, and technology transition. Efforts shall

include program planning and control, along with the information technology functions necessary to carryout ongoing and planned programs.

#### **4. REQUIREMENTS AND TASKS**

The contractor shall provide qualified personnel and resources to perform technical, programmatic, and administrative support services, and to deliver the identified services and products detailed herein.

##### **4.1 General Requirements**

The contractor shall provide management oversight to deliver the services and products described herein. The contractor shall provide the logistics, procurement resources, and facilities necessary to purchase, control, and report on the equipment, materials, supplies, software, and services required for the performance of the efforts defined herein. The contractor shall provide an on-site Program Manager (PM) to interface with the NRL's Contracting Officer's Representative (COR). The contractor shall support user communities by arranging for equipment demonstrations and tests; configuration and acquisition of new systems; and by providing day-to-day user support. The contractor shall be capable of providing and staffing facilities for the fabrication, test, and storage of unique fixtures and support equipment. To accomplish the work, the contractor shall have (i) office space and meeting facilities within the Washington, DC locale; (ii) document duplication and facsimile transmission resources; (iii) graphic and documentation reproduction resources; and (iv) internet connectivity and website hosting capabilities. Contractor personnel shall have the capability to interact with NRL's technical and management staff on a daily basis. The contractor may subcontract a portion of the efforts defined within this SOW to provide the expert talent needed to perform planning, special studies, design, analysis, development, test, integration, and documentation. The contractor shall obtain the concurrence of the COR before subcontracting any effort defined within this SOW. Because the successful performance of this SOW requires close coordination, meetings, and interaction with NRL, Government, military, academic, and private sector organizations, the contractor shall establish the appropriate non-disclosure agreements to ensure acceptable interface support. The tasks may result in scientific and/or technical publications. Documentation generated by the contractor and/or its subcontractors (e.g., notebooks, reports, memoranda, presentation materials, technical papers, software simulations, and analytical models) that are not submitted, as a contract data deliverable shall be made available upon COR request.

##### **4.2 Specific Requirements**

###### **4.2.1 Task 1 - Programmatic Support**

**4.2.1.1 Task 1-A—Management Support** - The contractor shall provide program management support for the duration of this effort. A single point-of-contact Program Manager (PM) for SOW technical and procedural matters shall be provided. This PM shall be cognizant of SOW technical elements and shall be responsible for the management of tasks conducted under this SOW. The PM shall interface with the COR, and as necessary, other Government Representatives and contractors. The PM shall oversee the efforts of on-site contractor

personnel and the PM shall ensure that tasks are performed according to SOW requirements. The PM shall be responsible for the performance of any *ad hoc* design studies and efforts that may be required to augment or supplement the tasks defined herein. The contractor shall provide a Monthly contractor On-Site Labor Report and a Monthly Financial Status Report. The PM shall ensure that required documents and deliverables are properly prepared and delivered. The contractor shall provide administrative support in areas such as word processing, scheduling, library maintenance, document preparation, completing periodic progress reports and briefings, to support the technical and programmatic work set forth herein. The contractor shall maintain timely and current status information and shall interface with the cognizant NRL engineers to disposition AIs and RIDs submitted against program documentation. [CDRL A001, A002, A003, A004, A005]

4.2.1.2 Task 1-B — Program Coordination - The contractor shall provide for the coordination, planning, communication and execution of key program events that include: System Requirements Review (SRR), Preliminary Design Review (PDR), Critical Design Review (CDR), Test Readiness Review (TRR), Technical Interchange Meetings (TIM), Launch Readiness Review (LRR), and Safety Reviews. The contractor shall provide a direct interface to collect and organize inputs for documentation, graphics, and web design personnel tasked with supporting the development, collection, coordination, and communication of technical documentation. The contractor shall provide periodic technical and progress reports that establish event status and that demonstrate the progress to-date. The contractor shall reproduce and distribute technical documents and engineering drawings, and provide for the coordination, production, and delivery of review material. [CDRL A003, A004, A005]

4.2.1.3 Task 1-C—Scheduling - The contractor shall provide for the analysis, design, review, updating, and maintenance of program schedules and networks that track program events and activities from program authorization-to-proceed through launch, and subsequent on-orbit operations. The contractor shall possess a working knowledge of, and shall use Primavera, a PC-based scheduling application for the generation of detailed schedules, which span overall program events, while providing filtered and specific detailed information on a subsystem-specific basis. The contractor shall support the use of MS Project and FastTrack scheduling applications and use these tools to analyze development processes and “what if” scenarios. Data shall be provided in Gantt and network chart formats. The contractor shall participate in the identification and tracking of program events and provide insight and analytical reporting on status and proposed schedule revisions. The contractor shall interface directly with assigned engineers and managers for data collection, validation, and verification, as well as schedule continuity. Using this data, the contractor shall provide periodic status and review reports. [CDRL A003, A004, A005]

4.2.1.4 Task 1-D — Cost Estimating - The contractor shall organize, evaluate, develop, and apply a cost analysis capability that provides a credible and consistent assessment of proposed system concepts. The contractor shall establish a cost estimation methodology for data collection; cost estimating relationships; cost driver identification; cost model development; basis-of-estimate; ground rules and work breakdown structures (WBS); cost-estimating, sensitivity analysis, profiling, and time-phasing; and documentation. The contractor’s approach shall accommodate proprietary interests of Government organizations

and other contractors regarding the use of their respective cost data. All data and models generated under this task shall become Government property. [CDRL A003, A004]

4.2.1.5 Task 1-E - Program Documentation - The contractor shall perform technical writing and editing tasks for the design, development, and specification of space and ground hardware and software systems, ground support equipment (GSE), payload and launch processing, and flight operations. These tasks shall include the following types of documents: analysis and trade studies; design specifications and ICDs; test plans, procedures, and reports; parts lists; drawing packages describing the system baseline; and launch base procedures. The contractor shall use computer-aided techniques. The contractor shall review and edit documents, manuals, reports, and other documentation for accuracy, literacy, and technical content. The contractor shall deliver documentation in both hard copy and on electronic media. The contractor shall interface with the NRL configuration management group and web design personnel to update and incorporate changes to pre/post-release documents and subsequent posting to the website. The contractor shall use Microsoft Word, Excel, and Adobe Framemaker for document production. The contractor shall have working knowledge of Macintosh and PC graphics software applications. [CDRL A003, A004, A005]

4.2.1.6 Task 1-F - Graphic Design - The contractor shall provide for the creation of illustrations, drawings, and other graphic material required by various programs, studies, proposals, or technical presentations. The contractor shall provide artistic capabilities and the computer resources to render aerospace illustrations, drawings, schematics, block diagrams, flow charts, and text files. The contractor shall scan and edit mechanical and electrical drawings produced using a Unigraphics 3D and PRO/E computer aided drafting (CAD) system. The contractor shall leverage existing drawings and illustrations from previous NRL developments and shall administer files on a variety of file servers. The contractor shall coordinate graphic requirements associated with program SRRs, PDRs, CDRs, TRRs, and other review cycles. The contractor shall possess requisite hardware, software and peripheral devices necessary to fulfill task requirements. [CDRL A003, A004, A005]

4.2.1.7 Task 1-G - Studies and Proposals - As directed by the COR, the contractor shall compose technical summaries and reports of surveys, investigations, or fact-finding efforts for tasks performed under this SOW. The contractor shall describe documents or information reviewed or referenced; organizations contacted; efforts undertaken; key progress and accomplishments, problems, or findings; and appropriate recommendations, conclusions, and action items taken. The contractor shall conduct research into new and emerging technologies and shall produce reports documenting their features and applicability to ongoing NRL programs. The contractor shall participate in the development and production of proposals for new programs of opportunity that may include special study and research programs. [CDRL A004]

4.2.1.8 Task 1-H - Program Plans - The contractor shall prepare program plans that describe the tasks, activities, schedules, and processes that the NRL will perform in the technology demonstration definition, design, development, fabrication, assembly, integration and test, and operations phases. These plans shall identify risk areas associated mitigation plans, technology drivers, and recommended execution strategies. The plan shall incorporate an



effective and streamlined development approach to the engineering, manufacturing, test, and product assurance disciplines. Hardware and software development processes, along with the roles and functions of the product assurance, configuration management, and specialty engineering personnel, shall be described. [CDRL A003, A004]

**4.2.1.9 Task 1-I - Meetings and Reviews** - The contractor shall provide the personnel and material resources and support the SRR, PDR, CDR, TRR, and other required technical reviews. The contractor shall participate and present technical reviews on the recommended designs, along with other conclusions and results. The contractor shall prepare technical review data packages. The contractor shall participate in periodic and informal working group meetings and discussions held at the direction of NRL. [CDRL A004]

#### **4.2.2 Task 2 - Computer and Multimedia Services**

**4.2.2.1 Task 2-A—Web Page Design and Maintenance** - The contractor shall be responsible for the conceptual design and implementation of websites supporting enterprise-wide computing. The contractor shall comply with the applicable DoD and NRL guidelines related to these activities. Websites shall consist of public relations sites, designed to provide visibility into ongoing NRL programs, as well as working websites with full capabilities for the storage, display, transfer, and dissemination of program material across a multi-user and geographically diverse environment. The contractor shall provide for the manipulation of media for posting to the Websites and shall display program documentation, review packages, address listings, program schedules, and other information in a user-friendly manner. The contractor shall be responsible for the design, configuration, implementation, and maintenance of necessary file serving methodologies (both hardware and software), data transfer and communication lines, and networking connectivity between the contractor's facility, the NRL, and other COR approved locations. [CDRL A003, A004, A005]

**4.2.2.2 Task 2-B—Database Design and Maintenance** - The contractor shall provide for the conceptual design, configuration, implementation, and maintenance of relational and non-relational databases applicable to enterprise-wide computing. The contractor shall design program and task specific databases to achieve system automation, enhanced data access, and maximized data sharing, while reducing redundancy and duplication of effort. The contractor shall design databases to run on either a resident File Server or interface with a designated program website. The contractor shall provide for the development, tracking, reporting, and related activities associated with program technical reviews, action items (AI), review item descriptions (RID), and requirement trace ability and verification. The contractor shall develop and maintain relational databases for the identification of requirement traceability and verification, system test methods and processes, historical tracking of tests and their results. The contractor shall support the analysis and reporting of test verification data. The contractor shall develop relational databases providing the ability to interface with the online web-based Intranets and enterprise-wide networking. The database shall provide for the collection, tracking, disposition, and reporting of submitted AI's and RIDs. The contractor shall interface these databases to distribute such data as AIs, RID forms, manufacturing travelers, status tracking forms, and Safety and Hazard Reports via a browser interface. Databases shall accommodate both Macintosh and PC users and shall be designed using FileMaker Pro,

Microsoft Access, and MySQL relational database management systems (RDBMS). The contractor shall be capable of writing unique scripts to automate repetitive processes and shall be capable of programming using both open source software (i.e., Linux, Java, JavaScript, PHP, MySQL, PERL) and proprietary developmental software (i.e., Microsoft Visual Basic). The contractor shall stay current with new and emerging database systems and capabilities. The contractor shall conduct surveys and product assessments, and submit recommendations for enhancement. [CDRL A003, A004, A005]

4.2.2.3 Task 2-C—Video and Multimedia - The contractor shall provide for the design, development, production, and delivery of program specific video footage, applying animation, voice, and graphic media. The contractor shall interface with the COR-designated personnel to develop concepts and content for the required video. The contractor shall acquire stock footage, or produce video animations of specific sequences. The contractor shall investigate and acquire existing aerospace simulations showing program specific events and key features. The contractor shall develop necessary script material and shall produce voice overlays consistent with video content. The contractor shall be capable of producing digital video (DV), VHS, S-VHS, and Beta formatted video and shall provide the expertise and software/hardware knowledge to accommodate simulations produced on such systems as Silicon Graphics, Media 100, and other 3D design and simulation applications (e.g., Live Picture). [CDRL A003, A004, A005]

#### 4.2.3 Task 3 - Program and Facility Support

4.2.3.1 Task 3-A—Computer Services - The contractor shall provide systems support for UNIX, DOS, NT, Windows 2000, Linux, and Macintosh workstations supporting the design, development, and testing process. System management services for Unigraphics and PRO-E 3D design and analysis workstations shall be provided. The contractor shall provide hardware and software maintenance for selected computational systems, and shall recommend, acquire, and implement hardware and software solutions, along with additions and upgrades to meet performance and capability needs. The contractor shall support Internet, Intranet, and Extranet technology application using NRL's local area network and wide area network (LAN/WAN) capabilities. Services shall be provided to the user groups in the form of computer system configuration and management, E-mail and Internet connectivity and configuration, user assistance, and configuration of necessary computer/software resources for multimedia briefing presentations. The contractor shall maintain system component accountability, manage accounts and scheduled maintenance agreements. [CDRL A003, A004, A005]

4.2.3.2 Task 3-B—Office Automation - The contractor shall conduct surveys, studies and perform analysis for the mapping of organizational processes and procedures. The contractor shall recommend the implementation of enhanced features for streamlining and workflow automation. The contractor shall interface with NRL managers, engineers, and financial and administrative personnel to define requirements and desired capabilities. The contractor shall design computer-generated standardized forms and material. The contractor shall provide the means for on-line data entry via a browser interface that links common fields and values via relational databases. Data shall be maintained on resident file servers that are multi-platform

(PC and Macintosh) compatible with interface and access via the Internet. [CDRL A003, A004, A005]

**4.2.3.3 Task 3-C- Program Tracking and Control** - The contractor shall provide for the development, tracking, analysis, and reporting of program status. Tasks shall include the development of program budgets at a system and subsystem level with roll-up to the program level, and shall account and track by specific WBS. The contractor shall utilize resident tracking systems and MS Excel for the generation of spreadsheets and analytical reports that include funding, costs and cost projections, as well as variances in budget versus expenditure projections. The contractor shall support Earned Value studies and analysis and shall submit reports showing analytical results. All data and models generated under this task shall become Government property. [CDRL A003, A004, A005]

**4.2.3.4 Task 3-D—Facility Services** - The contractor shall provide for the tracking, coordination, and planning of facility requirements. Tasks shall include, coordinating and planning for the refurbishment and upgrades of existing facility space, layout of floor plans to include modular furniture, maintenance and cleaning of existing facilities, movement, transportation, and set-up of office furniture and equipment. The contractor shall coordinate and arrange for repairs and/or upgrades to the facilities electrical, HVAC, plumbing, and access control features. The contractor shall have a working knowledge of Filemaker Pro and Visio software for computer-generated design and layout of office space and related facility requirements.

#### **4.2.4 Task 4 - Systems Engineering**

The contractor shall work in conjunction with NRL to develop concepts and top-level requirements for proposed missions, including the space, launch, ground, and operations segments that integrate the entire technical effort. The contractor shall develop detailed Concept of Operations (CONOPS) to a level sufficient for a Concept Design Review or System Design Review (CoDR/SDR). The contractor shall perform those tasks necessary to develop and refine the space system concept(s) and launch, ground, and operations segments in sufficient detail to establish a recommended system concept for proposed experiments or missions. The contractor shall emphasize design-to-cost and risk-reduction strategies when developing system concepts. The contractor shall assess current and emerging technologies that may have an application to these developments, and evaluate their potential for improving the developed approaches. [CDRL A003, A004, A005]

**4.2.4.1 Task 4-A - Concept Definition** - The contractor shall establish a streamlined system engineering process that defines tasks in performance-based specifications. The contractor shall identify, document, and integrate systems requirements; implement plans for multi-disciplinary teamwork, including potential suppliers; establish clear measurements of system responsiveness; encourage cost-effective innovation in products and practices; focus on process control; encourage risk management versus risk avoidance; and encourage tailoring of specifications and standards. The contractor shall identify preferred solutions based on cost, schedule, performance, and risk. The contractor shall develop a System Engineering Management Plan (SEMP) that serves as the technical foundation and that emphasizes a

performance-based approach to systems requirements and candidate solutions that satisfy those requirements. The contractor shall prepare program documents including the Mission Requirement Document (MRD), the System Performance Description Requirements (SPDR), the Experiment Requirement Document (ERD), subsystem and component specifications, Interface Control Documents (ICD), test plans, and test procedures. [CDRL A003, A004, A005]

4.2.4.2 Task 4-B - Systems Analysis and Trade Studies - The contractor shall perform those tasks necessary to develop and refine the requirements and performance of the approved system concept and its segments. The contractor shall perform and document system analyses, trades, and alternatives. The contractor shall show the sensitivity of performance and cost to variations in the space, launch, and ground architectures. The contractor shall perform studies, analyses, and simulations that demonstrate system compliance with the SPDR, MRD and the CONOPS. The contractor shall identify technology drivers that, if relaxed, would reduce cost and schedule, and offer alternatives allowing costs to remain within the program's objectives. The contractor shall prepare a Segment Specification(s) and ICDs defining the requirements among the system segments. Specific contractor activities shall include: definition of system level requirements; development of MRDs and SPDRs; and presentation of the appropriate analyses, trade studies, top level system, segment, and subsystem designs, test plans, critical parts and materials lists, and long lead parts.[CDRL A003, A004, A005]

4.2.4.3 Task 4-C - Systems Performance Verification - The contractor shall perform various verification techniques (e.g., test and evaluation, simulation and modeling, examination) to ensure that the system meets their performance requirements. The contractor shall develop and identify potential risks and formulate a risk management plan. The contractor shall perform thermal analysis and provide corrective plans where required. The contractor shall conduct in-depth analyses and collaborate with the designated mechanical, electrical, and software engineers to identify both documented and undocumented requirements and shall provide for technical writing, editing, and production of the resultant information. The contractor shall recommend and prepare the plans needed to transition systems concepts to the next stage of development or to transition developments to industry. [CDRL A003, A004, A005]

#### 4.2.5 Task 5—Design Engineering

4.2.5.1 Task 5-A - Design and Development - The contractor shall provide the mechanical, electrical, and aerospace engineering expertise required to upgrade or maintain existing and proposed space systems, platforms, instruments, structures, mechanisms, subassemblies, and GSE. The contractor shall provide the engineering capabilities to support the design and development of a space vehicle system capable of rendezvous and docking to form a single integrated space vehicle or as a free flyer. The contractor's activities shall include the conceptual design, analysis, detailed design and development of proposed systems, as well as design and development activities for the implementation of an orbit docking and maintenance system as a stand-alone vehicle. The contractor shall conduct design and development approaches for propulsion, structures, Guidance, Navigation, and Control (GNC),

thermal systems, avionics and their harness systems, and related electro-mechanical subsystem components. The contractor shall perform structural modeling and analysis tasks to support the design, development, and fabrication processes, along with related test plans, test support, and system integration actions. [CDRL A005]

4.2.5.2 Task 5-B - Structural Design and Drafting - The contractor shall compile a technical data package for the tasks described herein. This effort shall include: conceptualization of mechanical designs for structures, mechanisms, and housings; determining layouts, configurations, arrangements, dimensions, and tolerances of mechanisms, components, instrumentation, and assemblies; preparing detailed illustrations, and drawings; developing and maintaining assembly, fabrication, and specification drawings for spaceflight instrumentation, vehicles, and their GSE; and checking, reviewing, administering and managing the configuration and change control of design, engineering, fabrication, and assembly drawings. The contractor shall conduct planning for the design, development, and fabrication processes, along with related test plans, test support, and systems integration actions. [CDRL A005]

4.2.5.3 Task 5-C—Propulsion - The contractor shall provide technical expertise for design and development activities supporting monopropellant and bi-propellant Reaction Control Systems (RCS). The contractor shall provide design data, including layout drawings, component selection and arrangements, fluid lines, and tank mountings. The contractor's designs shall define the necessary assembly, checkout, servicing, and manufacturing functions. The contractor's activities shall be presented during technical reviews and shall be compatible with the selected launch range's safety criteria. The contractor shall provide design data sufficient to specify, acquire, and evaluate RCS components. The contractor shall provide technical support during assembly, integration, testing, cleaning, and field processing activities. [CDRL A003, A004, A005]

4.2.5.4 Task 5-D - Thermal Control Subsystems - The contractor shall provide engineering expertise and technical support for the design and development activities supporting thermal control design, model analysis, verification, fabrication, assembly, and test. The contractor shall support both active and passive thermal systems in the specification and modeling of thermal environments; developing conceptual designs; selecting heat pipes using capillary pumped loop (CPL) and other related systems; performing design verification tests; fabricating multilayer insulation (MLI) blankets; selecting and applying environmental covers, shields, and coatings; performing environmental testing; and documenting system tests. [CDRL A003, A004, A005]

4.2.5.5 Task 5-E – Electro-Mechanical and Optical Subsystems - The contractor shall perform analysis, trade studies, detailed design, and implementation of electro-mechanical devices, components, and subsystems. The contractor shall perform analysis, trades studies, detailed design, and implementation for optical devices, components, and subsystems. These efforts shall include component designs, models, test, evaluation, and calibration of optical sensors to determine their adequacy to meet mission requirements.

4.2.5.6 Task 5-F —Control Systems - The contractor shall perform design, analysis, simulation, test and evaluation of complex Attitude Determination and Control Systems

(ADCS) and related GNC systems for space, launch, and other vehicle systems. Efforts shall include feasibility studies, attitude dynamics, slew, tracking, and pointing control strategies, structures interactions, digital and multi-variant control techniques, stability analysis, sensor and actuator modeling, and system performance evaluations. The contractor shall develop automated onboard algorithms for tailored attitude control, targeting, and related contingency operations. The effort shall include fault tolerant automated intelligent control and diagnostic components for integration into real-time control systems. These autonomy software components should be developed or upgraded utilizing off-the-shelf (OTS) or readily available development tools to the greatest degree possible. The contractor shall develop modeling and simulation (M&S) tools supporting the analysis, design, development, specification, and acquisition of attitude sensors and their attitude and state navigation algorithms. Products generated under this task shall become Government property. The contractor shall provide design data and technical expertise sufficient to specify, acquire, and evaluate ADCS components and subsystems. This shall include system design, analysis and test for sun and earth sensors; star sensors; attitude control electronics; and associated flight spares. The contractor shall recommend modifications and/or additions to existing system designs, provide systems performance assessments, and document the design by a mix of computer and "hardware-in-the-loop" simulations to refine and verify actual flight parameters, including review of alternative design and implementation. The contractor shall ensure that ADCS and GNC hardware and software designs are compatible with systems requirements through a comprehensive system test program that includes M&S, rate table testing, and on-orbit evaluation. The contractor shall provide test support for all phases of component, subsystem, and system integration and test activities. [CDRL A003, A004, A005]

4.2.5.7 Task 5-G—Ground Support Equipment - The contractor shall design, acquire, modify, and adapt GSE to support spacecraft and payload integration and test to characterize their operation and performance under ambient and stressing conditions. Typical GSE elements will include: Mechanical and Electrical Aerospace Ground Equipment (MAGE/EAGE); thermal chambers (vacuum/cycle/shock); centrifuge or vibration tables; pyrotechnic shock systems; Engineering Development Model (EDM) structures, components, and support structures; propellant carts; environmental test data acquisition systems; command and data handling systems; wiring harnesses; and supporting design support systems. [CDRL A003, A004, A005]

#### 4.2.6 Task 6 – Fabrication, Assembly, Integration and Test

The contractor shall develop, integrate, and test hardware for prototype, flight, and ground support of space and launch systems. The hardware shall include structural components, mechanisms, electro-mechanical devices, electronic and avionics components, GSE, and other devices supporting NRL's program activities. The contractor shall design, procure, test, and integrate electronic and avionics systems for data acquisition, processing, and analysis; command and telemetry functions; low-noise signal conditioning and sensor interfaces; power conversion; and temperature control. [CDRL A003, A004, A005]

4.2.6.1 Task 6-A - Fabrication and Assembly - The contractor shall provide for the fabrication and assembly of space flight hardware for experimental payloads, spacecraft subsystems with

the flight vehicle. The contractor shall assist the NRL in the fabrication of unique one-of-a-kind piece parts, fixtures, and assemblies for use in the assembly of the structure. The contractor shall assemble and qualify space flight hardware and will operate all assembly equipment, and tools, and shall be capable of operating resident forklifts, portable cranes, overhead cranes, and other power equipment. The contractor shall provide for the acquisition of material, hardware, and components such as raw material, cherry locks and other fastening devices, and will interface with vendors for the production and delivery of components and hardware. The contractor shall maintain piece part inventories and will track and monitor the traveler process on selected programs.

4.2.6.2 Task 6-B - Integration and Test - The contractor shall provide engineering services to test and integrate flight instruments, experimental payloads, and spacecraft subsystems with the flight vehicle. The contractor shall assist NRL to establish requirements for environmental test of specific experiments, payloads, and subsystems to include mechanical and electrical experimental and functional testing, along with corrective actions where necessary. The contractor shall develop test plans and procedures for the integration and test of experiments, payloads, and subsystems into an operational payload or spacecraft at NRL or other NRL-designated facilities. The contractor shall assist NRL to perform system level environmental and functional testing, along with corrective actions where necessary. The contractor shall support integration and test activities including, but not limited to, natural environmental stresses (e.g., thermal, vacuum), EMC, shock and vibration, calibration, and CPT. The contractor shall document the results of subsystem and system level testing. The contractor shall provide flight systems software development, independent verification and validation (IV&V), and testing support. The contractor shall provide scientific expertise, engineering test support, and supplies for scientists and engineers performing special instrument and payload calibrations and reducing the resultant data sets. The contractor shall design, procure, fabricate, assemble, test, calibrate, and maintain specialized laboratory equipment, instrumentation, GSE, and facilities to support the integration and test activity. The contractor shall maintain spacecraft and instrument health and cleanliness during levels of integration and test. [CDRL A003, A004, A005]

4.2.6.3 Task 6-C - General Design and Development Support - The contractor shall design, acquire, assemble, test, calibrate, and maintain specialized and general-purpose laboratory equipment, structures (e.g.; processors, sensors, actuators, software, peripherals, structures, MAGE/EAGE, GSE, and instrumentation), along with their support facilities that are used by various space system projects and programs. The contractor shall provide the logistics and procurement resources necessary to acquire, subcontract, control, and report on the equipment, materials, supplies, tools, and services required for the performance of the efforts defined herein. Efforts may include acquisition and fabrication of flight avionics, test and development workstations, and related resources for engineering design, analysis, and development. The contractor shall submit procurement requests to the COR for review and authorization before procuring any materials, supplies, and services. The contractor shall maintain an automated database that allows for quick and expeditious retrieval of the procurement requests, their status, and final disposition. Materials and supplies shall be handled with strict accountability according to the applicable NRL policies for Government Furnished Materials or Equipment (GFM/GFE). [CDRL A001]

#### 4.2.7 Task 7 - Launch System Services

4.2.7.1 Task 7-A - Launch Systems - The contractor shall support the NRL to recommend and specify a launch system. The contractor shall address launch vehicle availability, performance, injection accuracy, fairing envelope constraints, and mass margins. The contractor's analyses shall also address vehicle preparation constraints, launch pad availability, facilities, personnel, and range requirements. The contractor shall present the design trades, studies, and the recommended system design during technical reviews. [CDRL A003, A004, A005]

4.2.7.2 Task 7-B - Mission Field Activities - The contractor shall perform analyses and prepare documentation to support the needs of the launch test range, as designated by the NRL. The contractor shall coordinate with safety and logistical personnel to plan, document, and support safety and readiness reviews to ensure safe and efficient payload processing. The contractor shall support spacecraft, payload, and launch vehicle working groups. The contractor shall provide documentation for spacecraft and payload-to-launch vehicle processing activities. The contractor shall develop, evaluate, and review Hazard Reports, Material Usage Agreements, Payload Safety Non-Compliance Reports, and related Safety Data Packages. The contractor shall support launch vehicle and payload integration activities. The contractor shall support spacecraft and payload handling during pathfinder and launch site activities. If tasked by NRL, the contractor shall be knowledgeable in launch flight vehicle fueling and contingency defueling. The contractor shall provide pre-launch and post-launch flight instrumentation support, as required. [CDRL A003, A004, A005]

#### 4.2.8 Task 8 – Mission Assurance

The contractor shall recommend and develop cost-effective, tailored project-level Safety, Reliability, and Quality Assurance (SR&QA) requirements for NRL review and concurrence. The contractor shall apply safety engineering and safety management principles, criteria, and techniques to optimize safety and enhance mission effectiveness. System safety activities shall stress early hazard identification, evaluation, and elimination or reduction of residual risk to preclude system damage or destruction and injury to personnel. The system safety program shall use NRL-specified guidelines. The contractor shall support the development of reliability, quality, and inspection system provisions that emphasize verification by test at the subsystem and system level. The quality assurance (QA) program shall include policies, requirements, and activities during the design, fabrication, test, and delivery of flight hardware. The contractor shall provide a reliability assurance program during the design, fabrication, test, and delivery of flight hardware. The contract shall perform or review Failure Modes and Effects Analyses. The contractor shall support a cost effective Parts, Materials, and Processes control program that includes the selection, qualification, acquisition, and correct application of parts and material for items developed under this SOW. The contractor shall perform contamination control planning, analysis, assessment, and reporting to support aerospace hardware development. The contractor shall plan and support the conduct of a verification program that includes functional verifications, performance tests, and end-to-end systems tests, in specific operational modes over the anticipated environment. The tests shall include flight software operational sequences. Flight hardware tests shall address thermal-vacuum, dynamics, EMC



and Electromagnetic Interference (EMI), and natural space environments. The contractor shall provide test plans, traceability matrices, and verification databases. [CDRL A003, A004, A005]

**ABBREVIATIONS AND ACRONYMS**

ACA	After Contract Award
ADCS	Attitude Determination and Control
AI	Action Item
BMDO	Ballistic Missile Defense Office
CAD	Computer Aided Design
CDR	Critical Design Review
CoDR	Concept Design Review
CONOPS	Concept of Operations
COR	Contracting Officer's Representative
CPL	Capillary Pipe Loop
CPT	Comprehensive Performance Test
DITP	Discriminating Interceptor
DoD	Department Of Defense
DOS	Digital Operating System
DV	Digital Video
EAGE	Electrical Aerospace Ground Equipment
EDM	Engineering Development Models
EMC	Electro-Magnetic Compatibility
EMI	Electro-Magnetic Interference
ERD	Experiment Requirement Document
FAME	Full-Sky Astrometric Mapping Explorer
GFE	Government Furnished Equipment
GFM	Government Furnished Material
GNC	Guidance, Navigation and Control
GSE	Ground Support Equipment
HVAC	Heating, Ventilation, and Air conditioning
ICD	Interface Control Documents
ICM	Interim Control Module
IV&V	Independent Verification And Validation
LAN	Local Area Network
LRR	Launch Readiness Review
M&S	Modeling and Simulation
MAGE	Mechanical Aerospace Ground Equipment
MLI	Multi Layer Insulation
MRD	Mission Requirement Document
NASA	National Aeronautics And Space Administration
NEMO	Navy EarthMap Observer
NRL	Naval Research Laboratory
OTS	Off-the-Shelf
PC	Personal Computer
PDR	Preliminary Design Review
PERL	Practical Extraction and Report Language
PHP	Personal Home Page

PM	Program Manager
QA	Quality Assurance
RDBMS	Relational Database Management Systems
RID	Review Item Description
RCS	Reaction Control System
SDR	Systems Design Reviews
SEMP	Systems Engineering Management Plan
SOW	Statement Of Work
SPDR	System Performance Description Requirements
SR&QA	Safety, Reliability, and Quality Assurance
SRR	Systems Requirements Review
TIMs	Technical Interchange Meetings
TRR	Test Readiness Review
UNIX	Universal Interactive eXecutive
VHS	Video Home System
WAN	Wide Area Network
WBS	Work Breakdown Structure

# CONTRACT DATA REQUIREMENTS LIST

Form Approved  
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the

<b>A. CONTRACT LINE ITEM NO.</b> ALL				<b>B. EXHIBIT</b> A		<b>C. CATEGORY:</b> TDP _____ TM- _____ OTHER _____			
<b>D. SYSTEM / ITEM</b>				<b>E. CONTRACT / PR NO.</b> N00173-02-R-LS03		<b>F. CONTRACTOR</b>			
<b>1. DATA ITEM NO.</b> A001		<b>2. TITLE OF DATA ITEM</b> Monthly Financial Status Report (MFSR)				<b>3. SUBTITLE</b>			
<b>4. AUTHORITY</b> (Data Acquisition Document No.)				<b>5. CONTRACT REFERENCE</b> SOW 4.2.1.1		<b>6. REQUIRING OFFICE</b> NRL, COR			
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<b>4. AUTHORITY</b> (Data Acquisition Document No.)				<b>5. CONTRACT REFERENCE</b> See SOW		<b>6. REQUIRING OFFICE</b> NRL, COR			
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# CONTRACT DATA REQUIREMENTS LIST

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## **CONTRACT DATA REQUIREMENTS LIST (CDRL) DELIVERABLES**

The contractor shall deliver the data items specified in the DD-1423, Contract Data Requirements List (CDRL) for the work performed under this SOW. Each CDRL item must be delivered in both electronic and paper form.

**A001 – Monthly Financial Status Report (MFSR)** - The contractor shall provide an MFSR by the 15th day of each month for the preceding month in both electronic and hard copy format. The MFSR shall show the number of hours and the fully burdened labor through fee for each employee and/or subcontractor. Details for the current period and total accrued cost shall be given. Expenses (e.g., travel, materials, and training) shall be separately reported with full burdens through fee. If an employee and/or subcontractor worked on more than one task (as defined by the COR), then the accounting for each task must be shown separately. The MFSR shall be in the contractor's format as approved by the COR.

**A002 - Contractor On-Site Labor Report** - The Contractor shall deliver the On-Site Labor Report no later than five (5) days after the end of each reporting month. The report must include as a minimum the following data: Reporting Period, Contract Number (and Order Number, if applicable), Contract Value, Current Funding, Amount Expended in Current Period, Total Expended to Date, Date Submitted, and Labor (including subcontractors) showing employee name and the number of hours worked on-site at NRL. If an employee and/or subcontractor worked on more than one task (as defined by the COR), then the accounting for each task must be shown separately. The report shall be in the contractor's format as approved by the COR.

**A003 - Scientific and Technical Reports** - The contractor shall provide the scientific and technical communities with a description of the precise nature and results accomplished. The reports shall be in contractor's format and prefaced with an executive summary. Detailed analyses and design updates shall be provided. Each deliverable may include a description of the analysis or demonstration performed and the results obtained; detailed design descriptions with drawings, schematics, and revised parts lists; updates on major technical issues; disposition of previous concerns; description of hardware and software development; specifications; schedules and cost estimates; and test plans and procedures.

**A004 – Presentation and Briefing Materials** - The contractor shall provide the ideas and concepts being presented using graphic and textual elements.

**A005 - Technical Data Packages** - The contractor shall provide CoDR, PDR/CDR, and other technical review design data packages supporting major milestone program review activities. Each deliverable shall include the detailed design description, individual program plan, compliance statements, and identification of significant risks. The technical data package shall include drawings, schematics, parts lists, analyses, simulations, and test data to demonstrate the integrity of the proposed component or subsystem. The project plan shall describe the analyses, simulations, hardware and software development, and testing required to bring the design through performance verification and flight readiness.

## PERSONNEL QUALIFICATIONS

The Naval Research Laboratory (NRL) established a representative matrix of the labor categories and skills to which the contractor shall propose. Resumes shall use the same labor category headings to relate the experience of the candidates to the minimum standards set forth below. If the contractor uses a labor category terminology other than that used in this provision, the contractor must provide a matrix clearly relating their proposed labor categories to those in the provision. Only one resume per key category is required. The proposed personnel shall be available for work efforts on the first day after contract award. Personnel designated as key personnel must possess or be capable of obtaining a SECRET clearance. The following are the desired qualifications.

**Senior Program Manager (Key Position)** – B.Sc., Engineering, Finance, Business, Operations Research. It is further desired that this individual have at least twelve years of directly related experience managing complex technical efforts in space systems. Experience shall include liaison with executive and technical personnel within the research and development community, as well as project and contract management and demonstrated experience with the DoD acquisition process. Direct experience in the planning, direction, and control of scientific and advanced technology development programs involving NRL's spaceflight vehicles, transfer stages, satellites, instruments, experimental payloads, or substantially equal DoD satellite systems. Specific experience with the programmatic and technical program planning required to support the developmental process including: budgets and schedules, risk analysis, engineering specialty integration, program reviews, technical performance measurement, interface control, and program planning. Candidate must have good written and oral communications skills as evidenced by publications and presentations at conferences.

**Project Manager (Key Position)** – B.Sc., Engineering, Finance, Business, or Operations Research. It is further desired that this individual have at least six years of directly related experience managing complex technical efforts in space systems. Candidate's experience should include liaison with project and contract management personnel. Specific experience with the technical coordination process among Government, co-contractor, Academic, and Industry personnel with relevant experience with the DoD acquisition process. Direct experience in the planning, direction, and control of scientific and advanced technology development programs involving NRL spaceflight vehicles, transfer stages, satellites, instruments, experimental payloads, or substantially equal DoD satellite systems. Specific experience with the technical program planning to support the developmental process including risk analysis, engineering specialty integration, program reviews, technical performance measurement, interface control, and program planning. Relevant experience supporting the space vehicle integration process.

**Senior Engineer, Aerospace (Key Position)** – M.Sc., Aerospace Engineering, Physics, Mechanical or Electrical Engineering. It is further desired that this individual have at least eight years of directly related experience providing solutions to a wide range of technical and engineering problems for spaceflight systems. Experienced with spacecraft and payload

integration and testing, spacecraft operations, and project engineering. Demonstrated experience with the design, analysis, fabrication, testing, and integration of aerospace hardware. Capable of resolving technical problems as they arise using engineering solutions based on analysis test, and engineering precedent. Relevant experience supporting the spaceflight vehicle and payload integration process in terms of thermal, electrical, and structural considerations. Demonstrated capability and experience to design, develop, and test prototype hardware using Government-furnished facilities. Capable of planning and conducting systems tests using advanced metrology and data analysis equipment. Relevant experience interfacing with space vehicle and launch integration personnel, safety managers, and technical lead engineers to develop launch range documentation. Candidate must have good written and oral communications skills as evidenced by publications and presentations at conferences.

**Engineer, Aerospace** – B.Sc., Aerospace Engineering, Physics, Mechanical or Electrical. It is further desired that this individual have at least six years of directly related experience providing solutions to a wide range of technical and engineering problems for spaceflight systems. Experienced with spacecraft and payload integration and testing, spacecraft operations, and project engineering. Demonstrated experience with the design, analysis, fabrication, testing, and integration of aerospace hardware. Capable of resolving technical problems as they arise using engineering solutions based on analysis and test. Relevant experience supporting the spaceflight vehicle and payload integration process in terms of thermal, electrical, and structural considerations. Demonstrated capability and experience to design, develop, and test prototype hardware using Government-furnished facilities. Capable of planning and conducting systems tests using advanced metrology and data analysis equipment. Relevant experience interfacing with space vehicle and launch integration personnel, safety managers, and technical lead engineers to develop launch range documentation.

**Master Scheduler (Key Position)** – B.Sc., Engineering, Physical Sciences, Mathematics. It is further desired that this individual have at least three years of directly applicable experience in the planning, scheduling, and control of spaceflight systems, instruments, and experimental payloads. Specific experience developing systems and subsystem schedules, task plans, planning payload and launch activities, and developing related program controls and procedures. Plans the development of structures and electro-mechanical devices for spaceflight use. Responsible for outlining and scheduling of task assignments, monitoring of day-to-day developmental activities, prioritization of work and effective performance of project tasks. Working knowledge of payload and launch site processing requirements with relevant experience in spacecraft systems test and integration. Candidate must have good written and oral communications skills, coupled with an in-depth knowledge of high-end scheduling programs like Primavera and general purpose scheduling programs like Microsoft Project.

**Sr. Systems Engineer, Guidance, Navigation, and Control (Key Position)** – M.Sc., Aerospace Engineering, Physics, Mathematics. It is further desired that this individual have at least six years of directly related experience developing mathematical and computer models and performance assessments of attitude determination and control systems for spaceflight and launch vehicles. Demonstrated capability to analyze control systems and develop



mathematical models, computer simulations, and spacecraft simulator software supporting stability analysis, parametric sensitivity, control loops, and system responses. Demonstrated capability and experience developing custom software for control system modeling and predication of system responses. Specific experience in real-time software systems including requirements analysis, development, and testing. Demonstrated capability to interface and support the flight operations staff in attitude determination and control, control system configuration, and anomaly resolution. Candidate must have good written and oral communications skills as evidenced by publications and presentations at conferences.

**Engineer, Information Technologies (Key Position)** – B.Sc., Computer Science, Computer Engineering, Physical Sciences, Mathematics. It is further desired that this individual have at least six years of directly related experience developing software algorithms, real-time software, and application software supporting spaceflight development programs. Demonstrated knowledge of Asynchronous Transfer Technology and SONET protocols. Demonstrated software development capabilities using Java, C, C++, and UNIX environments coupled with the expertise and capability to specify and develop protocols for use in information age technology networks. Demonstrated capability to design, implement, and maintain large relational databases, with strong proficiency in the use of Oracle DBMS. Demonstrated experience, knowledge, and familiarity with software development programs for spaceflight and experimental payloads, including software test beds and space vehicle simulators that have the capability to evaluate problems occurring during the developmental process. Computer graphics language developmental experience is highly desirable. Relevant experience with ground support equipment for testing and commanding spaceflight hardware and software in an operational satellite environment, including ground support software, browser-based control systems, and specialized telemetry formatting and decommutation equipment. Thoroughly familiar with operations on LAN/WAN using PC, Macintosh, Sun, and/or Silicon Graphics Workstation hardware and software.

**Engineer, Reaction Control Systems (Key Position)** – B.Sc.. It is further desired that this individual have at least six years of directly related experience involving the planning and execution of aerospace propulsion system development in the areas of fluid flow, design, component selection and arrangement, fluid lines and tank mountings, fabrication and assembly, testing, qualification, thermal design, mechanisms, and related mechanical devices. Relevant knowledge of the mechanics of materials, metal fatigue and corrosion, thermal control, liquid and solid propulsive systems, monopropellant and bipropellant propulsion systems, and the structural design of aerospace and spaceflight propellant systems. Demonstrated knowledge in the design and analysis of aerospace propulsion systems with relevant experience in the resolution of complex engineering and assembly problems. Demonstrated familiarity with launch site facilities and range safety requirements of various launch sites (Cape Canaveral, Vandenberg, and Wallops Island) is mandatory. Experienced with the conceptualization, design, analysis, and fabrication of complex propulsion Ground Support Equipment (GSE) and familiarity with planning aerospace system development. Work in the field must be of such significance and competence as to have established the Candidate as an authority in the design, assembly, test, and fueling of reaction control systems.

**Senior Engineer, Mechanical or Electrical (Key Position)** – B.Sc., Mechanical or Electrical Engineering, Physics, Mathematics. It is further desired that this individual have at least six years of directly related experience in the planning and execution of aerospace hardware development in the areas of fluid flow, structures, avionics, thermal control, aerodynamics, mechanisms, and mechanical devices. Demonstrated knowledge in the design and analysis of aerospace hardware with relevant experience in the resolution of complex engineering problems, including thermal, mechanical, and electrical tasks. Experience in detailed engineering, analysis, and development of mechanisms and electro-mechanical components and subassemblies that are deployed on space vehicles and flight instruments. Experienced with the conceptualization, design, analysis, and fabrication of complex GSE. Familiarity with planning and scheduling activities for aerospace system development. Demonstrated capability to use automated design tools.

**Technician, General Design and Support** – Associates Degree in Engineering Technology. It is further desired that this individual have at least three years of directly related experience supporting electro-mechanical design and assembly. Specific knowledge in the troubleshooting and repair of analog and digital components and microprocessor-based flight systems, integration, test, and processing of spaceflight electro-mechanical components, harnesses, structures and related subassemblies or GSE. Experienced with cable harnessing for spaceflight applications, and experience with maintenance, operations, and modification of electronic and mechanical systems. Operates and maintains electrical GSE and environmental facilities used during test activities. Performs fabrication and mechanical repair tasks using common tools and test equipment. Supports the fabrication, test, and integration tasks in the areas of electro-mechanical assembly, fabrication, propulsion, GSE, and developmental testing. Knowledge and experience in interrogating and measuring data from sensors and related data acquisition equipment.

**Project Analyst** - B.A. or B.Sc., Engineering, Finance, Business Marketing. It is further desired that this individual have at least four years of directly related experience with the tracking, analysis, and reporting of program plans and schedules. Specific experience developing budgetary estimates of program costs, risk analysis, and earned value applications. Relevant experience in tracking program cost to include actual versus budgeted, cost variances, and cost to completion. Capable of developing spreadsheets using mathematical formulas, macros, and the ability to link sheets within a workbook and link independent files. Capable of using in-house budgetary databases and spreadsheets for analytical purposes. Proficient with PC and Macintosh cross-platform computers, MS Excel, and other spreadsheet, and database programs.

**Project Coordinator** – Associates Degree. It is further desired that this individual have at least four years of directly related experience with the coordination and execution of space systems projects, programs, and studies. Specific experience developing systems and subsystem level schedules, project budgets, planning payload and launch activities, and developing program controls and procedures. Relevant experience planning, coordinating, and tracking technical reviews and interface working groups. Capable of developing databases using Microsoft Excel and FileMaker Pro to support ad hoc action items and materials tracking

activities. Proficient with PC and Macintosh cross-platform word processing, spreadsheet, and database programs.

**Senior Technical Writer/Editor** – B.A. or B.Sc., Engineering, Software, Economics, English. It is further desired that this individual have at least six years of directly related experience with the coordination and execution of coordinating and interfacing with engineering and technical personnel to prepare, edit, and proof technical specifications, plans, procedures, proposals, and documents related to space and launch systems, related instrumentation and other experimental payloads. Working knowledge of the requirements for hardware and software documentation using the appropriate military and commercial standards to meet a diverse set of program needs. Demonstrated capability to collect, compile, and track technical data and comments thereto, to include the documentation and tracking of CDRLs using automated tools. Proficient with PC and Macintosh cross-platform word processing, spreadsheet, and database programs.

**Technical Writer/Editor** – B.A. or B.Sc., Engineering, Software, Economics, English. It is further desired that this individual have at least three years of directly related experience with the coordination and execution of coordinating and interfacing with engineering and technical personnel to prepare, edit, and proof technical specifications, plans, procedures, proposals, and documents related to space and launch systems, related instrumentation and other experimental payloads. Working knowledge of the requirements for hardware and software documentation using the appropriate military and commercial standards to meet a diverse set of program needs. Demonstrated capability to collect, compile, and track technical data and comments thereto, to include the documentation and tracking of CDRLs using automated tools. Proficient with PC and Macintosh cross-platform word processing, spreadsheet, and database programs.

**Senior Designer, Graphics and Multimedia** – B.Sc. or B.A., Graphics Arts. It is further desired that this individual have at least six years of directly related experience. Demonstrated capability to apply graphics concepts for presentation, multimedia layouts, paste-ups, panels, color selection, and page layout principles, theories, and concepts. Demonstrated capability to coordinate and interface with engineering and scientific personnel to develop, prepare, edit, and proof graphically oriented technical papers, briefings, and documents. Demonstrated capabilities to collect, compile, and track graphically related files, clip art, and support files using automated tools. Proficient with PC and Macintosh cross-platform graphics, word processing, spreadsheet, and database programs. Demonstrated capability with graphics programs (Adobe Illustrator and Photoshop), non-linear editing programs, and 3-D presentation programs.

**Designer, Graphics and Multimedia** – B.Sc. or B.A., Graphics Arts. It is further desired that this individual have at least three years of directly related experience. Demonstrated capability to apply graphics concepts for presentation, multimedia layouts, paste-ups, panels, color selection, and page layout principles, theories, and concepts. Demonstrated capability to coordinate and interface with engineering and scientific personnel to develop, prepare, edit, and proof graphically oriented technical papers, briefings, and documents. Demonstrated capabilities to collect, compile, and track graphically related files, clip art, and support files

using automated tools. Proficient with PC and Macintosh cross-platform graphics, word processing, spreadsheet, and database programs. Demonstrated capability with graphics programs (Adobe Illustrator and Photoshop), non-linear editing programs, and 3-D presentation programs.

**Administrative and Clerical Specialist** – Two years of experience with non-technical writing, word processing, spreadsheets, proofreading, general computer art, paste-ups, and database maintenance. Specific experience with standard PC and Macintosh cross-platform applications software like Microsoft Word, Excel, PowerPoint, FileMaker Pro, and graphics software.

**Component Engineer and Procurement Specialist** – B.Sc., Electrical Engineering. It is further desired that this individual have at least six years of directly related experience performing parts engineering, including parts list and component reviews, parts selection, developing screening and qualification procedures, and reviewing test data to determine component acceptability. Demonstrated capability to initiate and track material and component procurements including interfacing with vendor technical and procurement personnel. Demonstrated capability to provide parts selection, vendor identification, and parts procurement of electrical, electronic, and electro-mechanical items, as well as mechanical assemblies and components. Demonstrated capability to coordinate, prepare, edit, and proof technical specifications, drawings, plans, procedures, and documents related to the specification and procurement of spaceflight materials, including a working knowledge of the requirements for component specification.

**Senior Intranet and Networking Specialist (Key Position)** – B.A. or B.Sc., Engineering, Computer Science, Graphic Design. It is further desired that this individual have at least six years of directly related experience in the specification and setup of domains, servers, telecommunications networks, remote access systems, and mail servers. Working knowledge of Java, JavaScript, PHP, and PERL to support networking solutions. Working knowledge of web page authoring tools, coupled with a demonstrated capability to develop graphically oriented solutions to internal Intranet needs. Demonstrated capability to interface databases with browser applications. Demonstrated capability to design, develop, program, and maintain custom home pages supporting a variety of links and types of content, including audio, animation, and text.

**Intranet and Networking Specialist** – B.A. or B.Sc., Engineering, Computer Science, Graphic Design. It is further desired that this individual have at least two years of directly related experience in assisting in the setup of domains, servers, telecommunications networks, remote access systems, and mail servers. Demonstrated ability to support both PC and Macintosh users for the installation and testing of operating systems and software applications. Working knowledge of Java, JavaScript, PHP, and PERL to support networking solutions. Working knowledge of web page authoring tools, coupled with a demonstrated capability to develop graphically oriented solutions to internal Intranet needs. Demonstrated capability to interface databases with browser applications. Demonstrated capability to design, develop, program, and maintain custom home pages supporting a variety of links and types of content, including audio, animation, and text.

**DEPARTMENT OF DEFENSE  
CONTRACT SECURITY CLASSIFICATION SPECIFICATION**  
(The requirements of the DoD Industrial Security Manual apply  
to all security aspects of this effort.)

**1. CLEARANCE AND SAFEGUARDING** SER: 005-02

a. FACILITY CLEARANCE REQUIRED

**SECRET**

b. LEVEL OF SAFEGUARDING REQUIRED

**SECRET**

**2. THIS SPECIFICATION IS FOR:** (X and complete as applicable)

a. PRIME CONTRACT NUMBER

☒

b. SUBCONTRACT NUMBER

☐

☒

a. ORIGINAL (Complete date in all cases)

DATE (YYYYMMDD)

20020123

b. REVISED  
(Supersedes all  
previous specs)

REVISION NO.

DATE (YYYYMMDD)

c. FINAL (Complete Item 5 in all cases)

DATE (YYYYMMDD)

c. SOLICITATION OR OTHER NUMBER

82-0007-02

DUE DATE (YYYYMMDD)

**4. IS THIS A FOLLOW-ON CONTRACT?**

☐ YES

☒ NO

If Yes, complete the following:

Classified material received or generated under

(Preceding Contract Number) is transferred to this follow-on contract.

**5. IS THIS A FINAL DD FORM 254?**

☐ YES

☒ NO

If Yes, complete the following:

In response to the contractor's request dated

, retention of the classified material is authorized for the period of

**6. CONTRACTOR** (Include Commercial and Government Entity (CAGE) Code)

a. NAME, ADDRESS, AND ZIP CODE

FOR RFP PURPOSES ONLY, NOT VALID FOR  
ACTUAL CONTRACT AWARD.

b. CAGE CODE

c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)

N/A

**7. SUBCONTRACTOR**

a. NAME, ADDRESS, AND ZIP CODE

N/A

b. CAGE CODE

c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)

N/A

**8. ACTUAL PERFORMANCE**

a. LOCATION

N/A

b. CAGE CODE

c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)

N/A

**9. GENERAL IDENTIFICATION OF THIS PROCUREMENT**

SPACECRAFT AND AIRBOURNE SYSTEMS DEVELOPMENT TASKS

**10. CONTRACTOR WILL REQUIRE ACCESS TO:**

YES

NO

a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION

☒

b. RESTRICTED DATA

☒

c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION

☒

d. FORMERLY RESTRICTED DATA

☒

e. INTELLIGENCE INFORMATION

☒

(1) Sensitive Compartmented Information (SCI)

☒

(2) Non-SCI

☒

f. SPECIAL ACCESS INFORMATION

☒

g. NATO INFORMATION

☒

h. FOREIGN GOVERNMENT INFORMATION

☒

i. LIMITED DISSEMINATION INFORMATION

☒

j. FOR OFFICIAL USE ONLY INFORMATION

☒

k. OTHER (Specify)

☐

**11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:**

YES

NO

a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER  
CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY

☐

☒

b. RECEIVE CLASSIFIED DOCUMENTS ONLY

☐

☒

c. RECEIVE AND GENERATE CLASSIFIED MATERIAL

☒

☐

d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE

☐

☒

e. PERFORM SERVICES ONLY

☐

☒

f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S.,  
PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES

☐

☒

g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION  
CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER

☒

☐

h. REQUIRE A COMSEC ACCOUNT

☒

☐

i. HAVE TEMPEST REQUIREMENTS

☐

☒

j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS

☐

☒

k. BE AUTHORIZED TO USE THE DEFENSE CARRIER SERVICE

☐

☒

l. OTHER (Specify)

☒

☐

SECURE VOICE CAPABILITY

**12. PUBLIC RELEASE.** Any information (*classified or unclassified*) pertaining to this contract shall not be released for public dissemination except as provided by the Industrial Security Manual or unless it has been approved for public release by appropriate U.S. Government authority. Proposed public releases shall be submitted for approval prior to release ☐ Direct ☒ Through (*Specify*)

COMMANDING OFFICER, NAVAL RESEARCH LABORATORY, WASHINGTON, DC 20375-5320, CODE 8202.

to the Directorate for Freedom of Information and Security Review, Office of the Assistant Secretary of Defense (Public Affairs)\* for review.  
\*In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

**13. SECURITY GUIDANCE.** The security classification guidance needed for this classified effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or the classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. (*Fill in as appropriate for the classified effort. Attach, or forward under separate correspondence, any documents/guides/extracts referenced herein. Add additional pages as needed to provide complete guidance.*)

Access to classified information is not required for the purpose of submitting a bid/proposal for this statement of work. However, prior to award of contract, the successful contractor will be required to have a SECRET facility clearance, SECRET storage capabilities, and personnel available with DoD granted personnel security clearances commensurate with level of access required for performance of contract.

**14. ADDITIONAL SECURITY REQUIREMENTS.** Requirements, in addition to ISM requirements, are established for this contract. ☐ Yes ☒ No  
(*If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. Provide a copy of the requirements to the cognizant security office. Use Item 13 if additional space is needed.*)

**15. INSPECTIONS.** Elements of this contract are outside the inspection responsibility of the cognizant security office. ☐ Yes ☒ No  
(*If Yes, explain and identify specific areas or elements carved out and the activity responsible for inspections. Use Item 13 if additional space is needed.*)

**16. CERTIFICATION AND SIGNATURE.** Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified effort. All questions shall be referred to the official named below.

a. TYPED NAME OF CERTIFYING OFFICIAL  
TINA SMALLWOOD

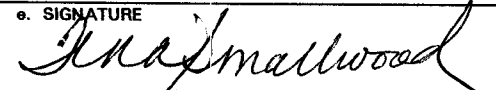
b. TITLE  
CONTRACTING OFFICER, SECURITY

c. TELEPHONE (*Include Area Code*)  
(202)767-2240/2521

d. ADDRESS (*Include Zip Code*)

NAVAL RESEARCH LABORATORY  
4555 OVERLOOK AVE., SW  
WASHINGTON, DC 20375-5320

e. SIGNATURE



**17. REQUIRED DISTRIBUTION**

- |                                     |   |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | a. CONTRACTOR   |
| <input type="checkbox"/>            | b. SUBCONTRACTOR  |
| <input checked="" type="checkbox"/> | c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR          |
| <input type="checkbox"/>            | d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION |
| <input type="checkbox"/>            | e. ADMINISTRATIVE CONTRACTING OFFICER                             |
| <input checked="" type="checkbox"/> | f. OTHERS AS NECESSARY 1221.1, 8202                               |

**LIST OF PARTIES INTERESTED IN TEAMING**

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